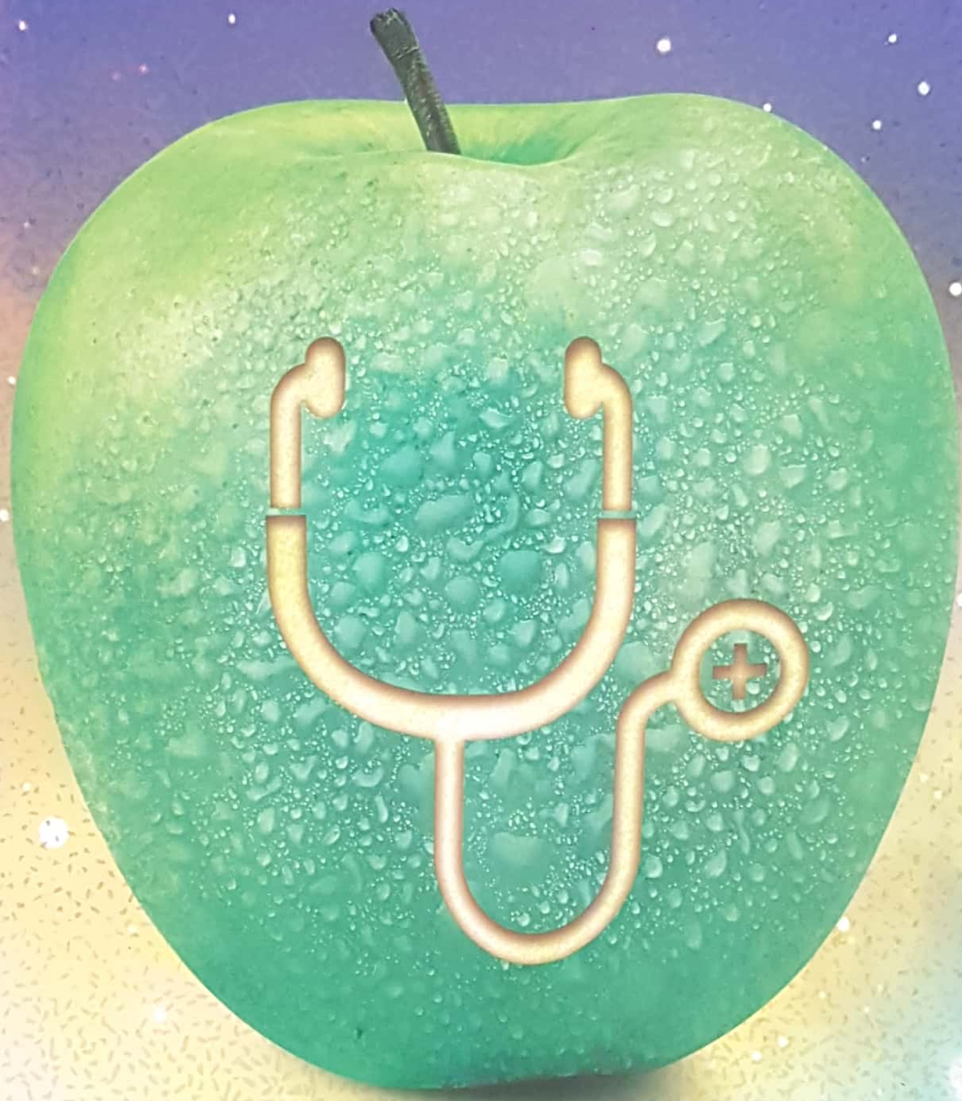
سیب سبز



زبان انگلیسی

ویرایش ۱۴۰۰

مدیریت تدوین:
دکتر صادق شفائی
حسین فرجی

مؤلف:
سانیا برادران

خداوند فرمود: هیچ نترسید همانا من با شما هستم،

(و همه چیز را) می‌شنوم و می‌بینم.

«سوره طه آیه ۴۶»

سیب سبز

زبان انگلیسی

ویرایش ۱۴۰۰

مؤلف: سانیا برادران

مدیریت تدوین: دکتر صادق شفائی، حسین فرجی

مؤسسه آموزشی دانش‌آموختگان تهران

انتشارات طبیبانه

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۰۲۱-۶۶۴۰۶۱۷۰

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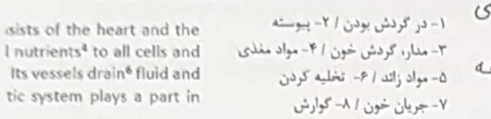
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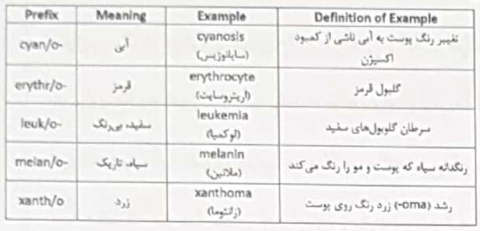
به نام یکتا

«To learn a language is to have one more window from which to look at the world»

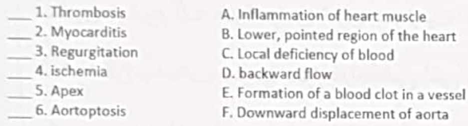
«یادگیری یک زبان مانند داشتن یک پنجره بیشتر برای نگاه به جهان است.»

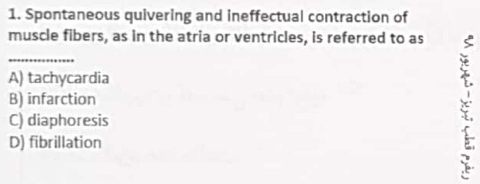
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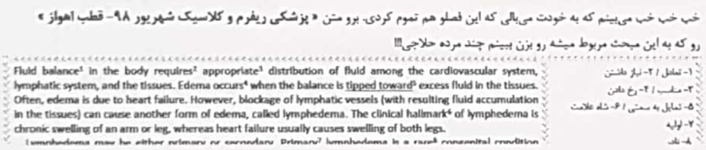


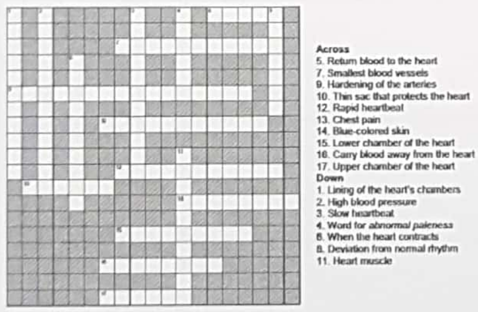


Prefix	Meaning	Example	Definition of Example
cyan/o-	آبی	cyanosis (سایانوزیس)	تغییر رنگ پوست به آبی ناشی از کمبود اکسیژن
erythr/o-	قرمز	erythrocyte (اریتروسایت)	گلبول قرمز
leuk/o-	سفید، بی‌رنگ	leukemia (لوکمیا)	سرطان گلبول‌های سفید
melan/o-	سیاه، تاریک	melanin (ملانین)	رنگدانه سیاه که به پوست و مو را رنگ می‌کند
xanth/o	زرد	xanthoma (زانتوما)	رشد (oma-) زرد رنگ روی پوست









با باز کردن این کتاب یعنی تو داری اجازه میشی که از پنجره پزشکی به دنیای اطرافت نگاه کنی. اصطلاحی داریم به نام Learning style که میگه افراد با توجه به حواس پنجگانه‌ای که از آن در یادگیری بیشتر استفاده می‌کنند، متفاوت هستن. افراد بیننده (Visual learners) بیشتر دوست دارن کلمات رو پرینت شده ببینن. نمودار و شکل و جدول و عکس دوست دارن. افراد شنونده (Auditory learners) نیاز دارن تا کلمات رو بشنونن و تلفظ کنند تا خوب یاد بگیرند. دوست دارن راجع به چیزی که یادگرفتن صحبت کنن و از وویس‌های ضبط شده کلاس بهره می‌برن. افراد لمس کننده (Tactile learners) از لامسه استفاده می‌کنند مثل نوشتن جواب سوالات یا نوت برداری و خلاصه نویسی. البته ما هممون از تمامی حس‌هامون با درجات متفاوت استفاده میکنیم و هرچه از کانال‌ها و حس‌های بیشتری استفاده کنیم احتمال اینکه اطلاعات جدید رو جذب کنیم و به یاد بیاریم بیشتره. این کتاب شما رو مجبور میکنه که از تمام حس‌هاتون استفاده کنین!!! ویژگی‌های این کتاب شامل:

طبقه بندی مطالب براساس دستگاه‌های بدن

میکروطبقه بندی مطالب براساس ساختاری و بالینی

متن انگلیسی در هر فصل با ترجمه لغات مهم آن کنار صفحه

تمرین‌های کوتاه matching و filling جهت تثبیت مطالعه

جداولی از مدیکال ترمینولوژی هر فصل شامل معنی، تلفظ (!) و مثال تست‌های منتخب از علوم پایه سال ۹۳ تا آذر ۹۸ با محوریت سال ۹۸

هر فصل دارای متن از علوم پایه مرتبط با موضوع فصل بازی یا جدول متقاطع برای رفع خستگی پس از هر فصل قرار نیست من ماهی بگیرم بدم به تو قراره تو ماهیگیری یاد بگیری. برای همین متن‌های انگلیسی و ترجمه لغات مهمش در کنار صفحه بهت کمک میکنه که خودت با دانش خودت متن رو بفهمی! قرار نیست ترجمه کنی! باید بفهمی و لغات جدید رو به دانسته‌های قبلیت ربط بدی. راجع به تلفظ کلمات هم به سبک جدیدی برات با حروف فارسی تلفظ کردم که راحت‌تر یاد بگیری و نیازی به دونستن فونتیک نداشته باشی، آر یو آندرستندیگ وات آیم سِیینگ؟ وقتی کتاب پرینت شده و بوی کتاب نو به تو انگیزه مطالعه میده (بویایی)، جدول داری (بینایی)، تلفظ هم داری (شنوایی)، تمرین هم باید حل کنی (لامسه)، فقط این تو هستی که باید ارادی کنی و کتاب رو بخوری (چشایی) تا طعم زبان رو بفهمی.

پوریا صحرانورد (مولف کتاب سال ۹۹)

و اما ....

🕒 برای تسلط به هر درس کارای زیادی میشه کرد. فیلم آموزشی، تست زدن یا امتحان رقابتی، مرور سریع با ویس، کتاب کار و.... تمامی این روش‌ها توی اپلیکیشن و سامانه‌ی آموزشی طبیبانه یا موجوده و یا در حال ایجادا همین الان یه سر بزن **exam .edutums.ir**

🕒 حجم سیب سبز جوریه که میشه به عنوان منبع امتحانات طول ترم هم بهش نگاه کرد. امّا ادعا نمی‌کنم با سیب سبز به تنهایی رتبه میاری. چون باید زرنگی رقیبا، فراموشی، نقایص محتوایی احتمالی و تعداد کم سؤالای جدید هر ترم رو هم در نظر بگیری. پلن آموزشی ما واسه ترکوندن و رتبه، اضافه کردن مطالعه‌ی تشریحی به سیب سبزه. مثل سیب سرخ و بسته‌ی آموزش غیرحضوری که توی درسای ماژور واقعاً بی‌نظیره. اطلاعات بیشتر رو از مؤسسه بگیر 🎬

🕒 مطمئنا کار ما هنوز ایرادای زیادی داره که فقط با کمک شما بهتر میشه. پس بی‌تعارف منتظر فیدبکت هستیم. خیلی خیلی ممنون میشیم اگه هر ایرادی توی هر زمینه‌ای می‌بینی بگی

🕒 با خرید کتاب سیب سبز خداحافظی نمی‌کنیم. تازه سلام می‌کنیم و عضوی از یه خانواده می‌شیم. ازین به بعد می‌تونیم با هم در ارتباط باشیم و واسه ارتقای آموزش پزشکی به همدیگه کمک کنیم. یادت باشه واسه علوم‌پایه هم بخش مهمی از کارمون توی کانال تلگرامه و تا روز آخر با همیم! روز آخر علوم‌پایه نه! روز آخر پزشکی. اصن مگه پزشکی آخرم داره؟! 🎓

کانال مشاوره‌ی آموزشی علوم‌پایه 👈 @oloompaye

اکانت خرید محصولات 👈 **@edutums**

فیدبک و اعلام همکاری 👈 @oloompaye_admin

حالا برو سر دَرسِت. ببینیم چقد می‌ترکونی!

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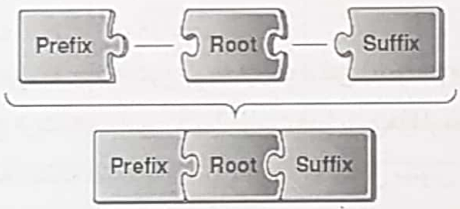
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Unit 1 Basics of Medical Terminology

☑ **مقدمه**

خب قبل از اینکه شروع کنیم یه توضیح کوچیکی بدم. مدیکال ترمینولوژی (واژگان مربوط به پزشکی) یک مجموعه‌ای از کلمات خاص هستند که توسط دکترا و پرستارا و اینا استفاده میشن تا ارتباطش دقیق‌تر و موثرتر باشد. هر تخصص مرتبط با بهداشتی نیاز به فهمیدن مدیکال ترمینولوژی داره و خب ما هم تو این کتاب میخوایم دستگاه دستگاه بررسی کنیم که با این کلمات آشنا بشیم. از اونجایی که مدیکال ترمینولوژی براساس کلمات لاتین و یونانی هست، ساختارش همه جای دنیا یکسانه و ثابت و واحده. این روش خیلی موثر هستش، اگرچه بعضی کلمات طولانی هستن ولی همون کلمات طولانی اومدن جملات طولانی‌تر رو کوچیک کردن تا یه کلمه ایجاد بشه. مثلا gastroduodenostomy یعنی «ایجاد منفذ جهت ارتباط بین معده و اولین بخش روده‌ی کوچک». بخش gastr یعنی معده، بخش duoden به معنوای بخش اول روده کوچک هست و بخش ostomy به معنای ایجاد ارتباط یا منفذ هست.

دنیای واژگان پزشکی خیلی بزرگه و یادگیریش جوریه که انگار داری کل واژه‌های یه زبان دیگه رو یاد میگیری و حتی مدام هم این دایره لغات داره گسترده میشه! مثلا به کلماتی که در رابطه با کامپیوتر به واژگان اضافه شدن نگاه کن: نرم افزار، موتور جست و جو، USB، اپلیکیشن، وبلاگ و غیره. یادگیری این لغات شاید به نظر خسته کننده یا اصلا نشدنی باشه ولی روش‌هایی هست که بهت تو یادگیری و به یادآوری لغات و حتی تو حدس زدن معنی یه لغتی تا حالا نشنیدی کمک میکنه. تو این کتاب از همین روش‌ها استفاده کردیم. بیشتر عبارت‌های پزشکی میتونن به اجزای کوچیک‌تری تقسیم بشن: ریشه (root)، پیشوند (prefix) و پسوند (suffix) که این اجزا تو هر کلمه‌ای باشن معناشون تغییر نمیکنه. با یاد گرفتن معنی این اجزا، میتونی خیلی از کلمات دیگه رو حفظ و آنالیز کنی. دیگه مقدمه همین حد بسه... بریم تو کار!



Word

◈ **اجزای کلمه (Word Parts)**

اجزای کلمه در سه دسته قرار می‌گیرن:

۱. ریشه (root) واحد اصلی هر واژه‌ی مدیکال هست اساس معنی کلمه رو تشکیل میده و بخشی هست که اجزای تغیری دهنده‌ی معنی به اون اضافه میشن. پس پیشوند و پسوند میان به ریشه میچسبن.

۲. پسوند (suffix) یک جزء کوتاه یا مجموعه‌ای از اجزای کوچیک هستن که به انتها (یا همون بعد) ریشه اضافه میشن تا معناش رو تغییر بدن. در ادامه کتاب هر ما سافیکس رو با یه خط تیره قبلش نشون دادیم مثلا اینجوری *itis*-(به معنای التهاب).

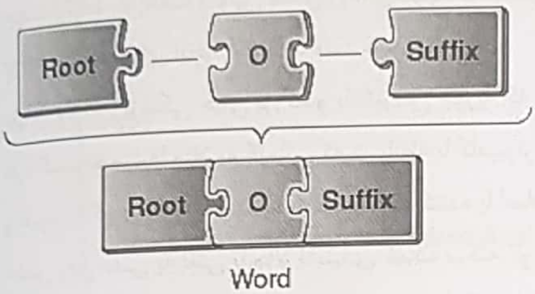
۳. پیشوند (prefix) یک جزء کوتاه از کلمه هست که قبل از ریشه اضافه میشه و معنی اونو تغییر میده. در ادامه کتاب ما بعد از پیشوند خط تیره قرار میدیم تا نشونش بدیم مثلا اینجوری - *pre* (به معنای قبل).

بنابراین کلمات از ریشه و پسوند و پیشوند تشکیل شدند. یه مثال بزنیم حالا مثلا یه کلمه ساده مثل *learn* یعنی «یاد گرفتن». این رو ما ریشه در نظر بگیریم. اگر پسوند *er*- رو انتهاش اضافه کنیم میشه *learner* یعنی «کسی که یاد میگیرد». اگر پیشوند -re رو اضافه کنیم به ریشمون میشه *relearn* یعنی «دوباره یاد گرفتن». شایان ذکر هست که تمام ریشه‌ها کلمات کاملی برای خودشون نیست مثل همین *learn* که معنی بده به تنهایی. درواقع اکثر ریشه‌های مدیکال از زبان‌های مختلف گرفته شدن و جوری هستن که حتما باید در ترکیب با چیزای دیگه استفاده بشن. مثلا واژه‌ی لاتین *pulmo* به معنای «ریه» که ریشش در اصل *pulm* هست و به تنهایی به کار نمیره حتما باید به یه چیزی بچسبه. در برخی موارد ریشه‌های لاتین و یونانی مختلف برای یک چیز به کار میرن؛ مثلا ریشه یونانی *nephr* و ریشه لاتین *ren* هر دو اشاره به «کلیه» دارن.

همچنین اینم بدون که برخی ریشه‌ها در تخصص‌ها و فیلدهای مختلف معنای متفاوتی میدن. دقیق مثل واژه *web* یا *cloud* یا *tweet* که تو زبان کامپیوتر با تو زمان عادیمون معناش متفاوته. ریشه *myel* به معنای «مغز» ممکنه که هم برای مغز استخوان و هم برای نخاع به کار بره. یا مثلا ریشه *scler* به معنای «سخت، سفت» ممکنه برای سفیدی چشم هم به کار بره. یا ریشه *cyst* معنای «یک کیسه پر» میده ولی به طور اختصاصی مثانه هم معنی میده. درنتیجه گاهی اوقات شما باید محتوا رو بدونین که یک کلمه رو معنی کنین.

یک **کلمه مرکب** (compound word) دارای بیش از یک ریشه هست. تو فارسی هم داریم اینطوری مثلا «کتاب خانه» که یک کلمه هست ولی هر جزء جداگونه میتونه ریشه باشه. مثال انگلیسی هم مثلا *eyeball* یا *wheelchair*. چندتا مثال هم از کلمات مرکب مدیکال بزنیم مثل *cardiovascular* (مربوط به قلب و عروق) یا *urogenital* (مربوط به دستگاه ادراری و تولید مثل) یا *lymphocyte* (یک گلبول سفیدی که در دستگاه لنفاوی دیده میشه).

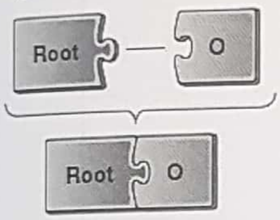
◈ فرم‌های ترکیبی (Combining Forms)



وقتی یه پسوند یا یک ریشه‌ی دیگه با یه حرف صامت (بی‌صدا) شروع میشن و به ریشه اصلی اضافه میشن، یک حرف مصوت (صدادار) بین ریشه جزء بعدی اضافه میشه، که بشه تلفظش کرد! لال نشیم وسط کلمه! مصوت اتصالی (combining vowel) معمولا یک «o» هست مثل مثالی که داشتیم (gastroduodenostomy) ولی بعضا میتونه «a، e، i» هم باشه.

بنابراین وقتی پسوند *logy*- به معنای «مطالعه‌ی یا study of» رو به ریشه *neur* به معنای «عصب یا دستگاه عصبی» وصل می‌کنیم، یه مصوت اتصالی اضافه میشه: neurology = neur + o + logy (مطالعه دستگاه عصبی).

ریشه‌هایی رو که با مصوت اتصالی نشون میدن رو **فرم‌های ترکیبی** می‌نامیم.



Combining form

در طول کتاب فرم‌های ترکیبی ریشه‌ها رو با مصوت‌های رایجشون رو بعد از یک اسلش (/) نوشتم مثلا اینجوری *neur/o* اما برای سادگی کار قرار بذاریم همون «ریشه» صداشون کنیم! حواست فقط باشه هاااا از مصوت اتصالی زمانی که جزء اخر کلمه با یه مصوت شروع بشه استفاده نمیکنیمااا. بدیهیه این کاملا! وقتی میتونی تلفظش کنی مگه مشکل داری مزاحم یه مصوت اتصالی بشی! مثلا همون ریشه *neur* رو وقتی با پسوند *itis*- (به معنای التهاب) رو ترکیب کنیم میشه: neur + it is = neuritis (التهاب یک عصب). دیدی که مصوت اضافه نشد! البته این قانون تو تلفظ یه استثناهایی هم داره که حالا تو درس‌ها بیشتر آشنا میشی.

◈ کلمات منتهی به x (Words Ending in x)

وقتی یه پسوند رو به کلمه منتهی به *x* اضافه می‌کنی، اون *x* تبدیل به *g* یا *c* میشه. اگر قبل از *x* یه حرف صامت بود مثلا *yx* یا *nx*، اون *x* تبدیل به *g* میشه. به عنوان مثال *pharynx* (حلق) میشه *pharyngeal* (مربوط به حلق) که اینجوری تلفظ میکنی «فارینجیال»! یا مثلا *coccyx* (انتهای ستون فقرات) میشه *coccygeal* (مربوط به کوکسیکس) که اینجوری تلفظ میکنیم «کوکسیجیال»!

اگر قبل از *x* یه حرف مصوت اومده بود مثلا *ax* یا *ix*، اون *x* رو تبدیل به *c* میکنی. بنابراین *thorax* (قفسه سینه) میشه *thoracic* (مربوط به توراکس) که تلفظش میشه «تورَسیک» یا مثلا *cervix* (گردن) میشه *cervical* (مربوط به گردن) با تلفظ «سرویکال»!

◈ پسوندهایی با شروع rh (Suffixes beginning with rh)

زمانی که پسوندی که با *rh* شروع می‌شود را به ریشه اضفه می‌کنین اون r تکثیر پیدا میکنه!!! یعنی دوبرابر میشه! مثال‌های زیر رو نگاه کن:

hem/o (خون) + -rhage (بیرون ریختن) = hemorrhage (خونریزی)

men/o (قاعدگی) + -rhea (تخلیه، جریان) = menorrhea (جریان خون قاعدگی)

خیلی خب چهار تا دونه تست برو ببینم این مباحث رو کامل یاد گرفتی یا نه!

1. Epi- in the term epigastric is a ____
A. word root
B. prefix
C. suffix
D. combining form

2. The combining form for thorax (chest) is ____
A. thorax/o
B. thor/o
C. thorac/o
D. thori/o

3. The term musculoskeletal is a(n) ____
A. abbreviation
B. word root
C. combining form
D. compound word

4. The adjective for larynx is ____
A. larynxic
B. laryngeal
C. larynal
D. largeal

Answer: 1. B / 2. C / 3. D / 4. B

◈ پسوندها (Suffixes)

در این مرحله یه سری پسوندهای مهم و پایه‌ای رو براتون میارم.

الف) پسوندهایی که معنی «وضعیت» می‌دهند. یعنی همون condition of ye chizi معنی میدن.

Suffix	Example	Definition of Example
-ia	dementia (دیمنشیا)	فقدان (-de) عملکرد ذهنی
-ism	racism (ریسیزم)	تبعیض براساس نژاد
-sis	thrombosis (ترومبوزیس)	وجود یک لخته خون در رگ
-y	atony (ای‌تونی)	فقدان (-a) تون عضلانی

ب) پسوندهای مربوط به تخصص‌های پزشکی.

Suffix	Meaning	Example	Definition of Example
-ian	متخصص در یک زمینه	physician (فیزیشن)	پزشک
-iatrics	تخصص پزشکی	pediatrics (پدیاتریکس)	مراقبت و درمان از کودکان (ped/o)
-iatry	تخصص پزشکی	psychiatry (ساکیاتری)	مطالعه و درمان اختلات روانی
-ics	تخصص پزشکی	orthopedics (اورتوپدیکس)	مطالعه و درمان مفاصل و استخوان

Suffix	Meaning	Example	Definition of Example
-ist	متخصص در یک زمینه	podiatrist (پودیاتریست)	کسی که پا را مطالعه و درمان می‌کند
-logy	مطالعه	physiology (فیزیالوژی)	مطالعه عملکرد موجود زنده (physic/o = طبیعت)

ج) پسوندهای صفت‌ساز به معنی «مربوط به»، «شبیه».

Suffix	Example	Definition of Example
-ac	cardiac (کاردیک)	مربوط به قلب
-al	vocal (وکال)	مربوط به صوت
-ar	nuclear (نوکلئار)	مربوط به هسته
-ary	salivary (سالیوری)	مربوط به بزاق
-form	muciform (موسیفرم)	شبیه به موکوس
-ic	anatomic (اناتومیک)	مربوط به آناتومی
-ical (ic + al)	electrical (الکتریکال)	مربوط به الکتریسیته
-ile	virile (ورایل)	مربوط به مرد، عضله (مردانه)
-oid	lymphoid (لیمفوئید)	مربوط به دستگاه لنفاوی
-ory	circulatory (سرکیولیتوری)	مربوط به گردش خون
-ous	cutaneous (کیوتینس)	مربوط به پوست (cutis = پوست)

د) پسوندهای جمع‌ساز که کلمات مفرد (singular) رو جمع می‌بندن (plural).

Word Ending (انتهای مفرد کلمه)	Plural Ending (انتهای جمع کلمه)	Singular Example (مثال مفرد کلمه)	Plural Example (مثال جمع کلمه)
a	ae	vertebra (معنی: مهره ستون فقرات) (تلفظ: ورتبرا)	vertebrae (ورتبری)

Word Ending (انتهای مفرد کلمه)	Plural Ending (انتهای جمع کلمه)	Singular Example (مثال مفرد کلمه)	Plural Example (مثال جمع کلمه)
en	ina	lumen (معنی: سوراخ مرکزی) (تلفظ: لومن)	lumina (لومینا)
ex, ix, yx	ices	matrix (معنی: ماده زمینه) (تلفظ: میتریکس)	matrices (میتریسز)
is	es	diagnosis (معنی: تشخیص) (تلفظ: دایاگنوزیس)	diagnoses (دایاگنوزس)
ma	mata	stigma (معنی: برچسب، علامت) (تلفظ: استیگما)	stigmata (استیگماتا)
(nx (anx, inx, ynx	nges	phalanx (معنی: استخوان انگشت) (تلفظ: فلنکس)	phalanges (فلنجیز)
on	a	ganglion (معنی: تودهی بافت عصبی) (تلفظ: گنگلیون)	ganglia (گانگلیا)
um	a	serum (معنی: مایع رقیق) (تلفظ: سیروم)	sera (سیرا)
us	i	thrombus (معنی: لخته خون) (تلفظ: ترومبس)	thrombi (ترومبای)

◈ پیشوندها (Prefixes)

در این مرحله یه سری پیشوندهای مهم و پایه‌ای رو براتون میارم.

الف) پیشوندهای مربوط به عدد

Prefix	Meaning	Example	Definition of Example
prim/i-	اول	Primary (پرایمری)	اول
mon/o-	یک	monocular (موناکولار)	دارای یک قطعه چشمی یا درگیر یک چشم
uni-	یک	unite (یونایت)	متحد شدن

Prefix	Meaning	Example	Definition of Example
hemi-	نصف، یک طرف	heisphere (همیسفیر)	نصف یک کره (نیم‌کره)
semi-	نصف، نسبی	semipermeable (سمی‌پرمئابل)	نیمه تراوا
bi-	دو، دوبار	binary (باینازی)	متشکل از دو بخش
di-	دو، دوبار	diatomic (دیاتومیک)	دارای دو اتم
dipl/o-	دوبرابر	diplococci (دیپلوکوکسی)	باکتری گرد که در گروه‌های دوتایی تکثیر میابد
tri-	سه	tricuspid (تری‌کاسپید)	دارای سه نوک یا سه لت
quadr/i-	چهار	quadruplet (کوادروپلت)	یکی از چهارقلوها
tetra-	چهار	tetralogy (تترالوژی)	گروهی از چهار جزء
multi-	بسیار	multicellular (مولتی‌سلولار)	متشکل از سلول‌های بسیار
poly-	بسیار	polymorphous (پلی‌مورفس)	دارای شکل‌های بسیار

ب) پیشوندهای مربوط به رنگ

Prefix	Meaning	Example	Definition of Example
cyan/o-	آبی	cyanosis (سایانوزیس)	تغییر رنگ پوست به آبی ناشی از کمبود اکسیژن
erythr/o-	قرمز	erythrocyte (اریتروسایت)	گلبول قرمز
leuk/o-	سفید، بی‌رنگ	leukemia (لوکمیا)	سرطان گلوبول‌های سفید
melan/o-	سیاه، تاریک	melanin (ملانین)	رنگدانه سیاه که پوست و مو را رنگ می‌کند
xanth/o-	زرد	xanthoma (زانتوما)	رشد (-oma) زرد رنگ روی پوست

ج) پیشوندهای مربوط به زمان ویا موقعیت

Prefix	Meaning	Example	Definition of Example
ante-	قبل	antenatal (آنته‌نیتال)	قبل از تولد
pre-	قبل، جلو	premature (پری‌مچر)	وقوع قبل از زمان صحیح
pro-	قبل، جلو	prodrome (پرودروم)	علائم قبل از بیماری
post-	بعد، پشت	postnasal (پست نیزال)	پشت بینی

د) پیشوندهای منفی‌کننده

Prefix	Meaning	Example	Definition of Example
a-, an-	بدون، فاقد، فقدان	anhydrous (انهایدرس)	فاقد آب
anti-	مخالف	antiseptic (آنتی‌سپتیک)	داروی جلوگیری از عفونت
contra-	مخالف	contraindicated (کنترااییندیکیتد)	برخلاف توصیه‌ها، منع مصرف
de-	پایین، بدون، حذف، فقدان	decalcify (دیکلسفای)	حذف کلسیم
dis-	فقدان، حذف، جدایی	dissect (دایسکت)	جدایی بافت‌ها برای مطالعه آناتومی
in-, im-	منفی	incontinent (اینکانتیننت)	عدم توانایی کنترل یا نگهداری تخلیه
non-	منفی	noncontributory (نان‌کانتریبیوتری)	غیرقابل توجه، چیزی که اطلاعاتی به تشخیصمون اضافه نمیکنه
un-	منفی	uncoordinated (آن‌کوئوردینیتد)	عدم هماهنگی، عدم کار با یکدیگر

ه) پیشوندهای مربوط به جهت

Prefix	Meaning	Example	Definition of Example
ab-	دور از	abduct (ابداکت)	دور کردن از خط وسط
ad-	به سمت، نزدیک	adduct (اداکت)	نزدیک کردن به خط وسط

Prefix	Meaning	Example	Definition of Example
dia-	از طریق	diarrhea (دایاریا)	تخلیه مکرر مدفوع مایع (اسهال)
per-	از طریق	percutaneous (پرکیوتینس)	از طریق پوست
trans-	از طریق	transected (ترنس سکتد)	بریدن به داخل

و) پیشوندهای مربوط به درجه یا میزان

Prefix	Meaning	Example	Definition of Example
hyper-	روی، بیش از حد، افزایش	hyperthermia (هایپرترمیا)	دمای بالای بدن
hypo-	زیر، کاهش	hyposecretion (هایپوسکشن)	کاهش تولید یک ماده
olig/o-	کم (scanty)	oligospermia (اولیگواسپرمیا)	کاهش تعداد اسپرم در مایع منی
pan-	تمام، کل (entire)	pandemic (پاندمیک)	بیماری که تمام جمعیت را درگیر کرده
super-	بالا، بیش از حد	supernumerary (سوپرنومیرری)	تعداد زیاد

ز) پیشوندهای مربوط به سایز و اندازه

Prefix	Meaning	Example	Definition of Example
equi-	مساوی	equilibrium (اکوئیل ایبریوم)	تعادل
eu-	صحیح، خوب، ساده، طبیعی	euthanasia (یوتانازیا)	مرگ آسان و بدون درد
hetero-	دیگر، متفاوت، غیرمساوی	heterogenous (هتروجنس)	متشکل از مواد متفاوت
homo- homeo-	یکسان، بدون تغییر	homograft (هوموگرافت)	پیوند بافت بین دو نفر از یک گونه
iso-	مساوی، یکسان	isocellular (ایزوسلولار)	متشکل از سلول‌های مشابه
macro-	بزرگ	macroscopic (ماکروسکوپیک)	به اندازه کافی بزرگ جهت مشاهده بدون میکروسکوپ
mega-, megal/o-	بزرگ	megacolon (مگاکولون)	بزرگی کولون

Prefix	Meaning	Example	Definition of Example
micro-	کوچک	microcyte (میکروسایت)	سلول بسیار کوچک
neo-	جدید	neonate (نئونیت)	نوزاد
normo-	طبیعی	normovolemia (نورموولمیا)	حجم طبیعی خون
ortho-	مستقیم، صحیح، ایستاده	orthodontics (اورتودونتیکس)	شاخه‌ای از دندان پزشکی
poikilo-	متغیر، غیرطبیعی	poikilothermic (پویکیلوترمیک)	دارای دمای متغیر بدن
pseudo-	کاذب	pseudoplegia (سودوپلژیا)	فلجی کاذب
re-	دوباره، پشت	reflux (ریفلاکس)	بازگشت، جریان برعکس

ح) پیشوندهای مربوط به موقعیت

Prefix	Meaning	Example	Definition of Example
dextr/o-	راست	dextrogastria (دکستروگاستریا)	جابه جایی معده به راست
sinistro-	چپ، در طرف چپ	sinistromanual (سینیسترومنوال)	چپ دست
ec-, ecto-	بیرون	ectopic (اکتوپیک)	خارج از موقعیت طبیعی
ex/o-	دور، بیرون	excise (اکسایز)	برش
end/o-	درون	endoderm (اندودرم)	لایه درونی رویان در حال رشد
mes/o-	میان	mesencephalon (فرنسفالون)	بخش میانی مغز
syn-, sym-	با هم	synapse (سیناپس)	پیوستگاه بین دو سلول عصبی
tel/e-, tel/o-	انتها، دور، با فاصله	teletherapy (تله‌تراپی)	رادیوتراپی با فاصله از بدن

یه تمرین کوچیک هم حل کن:

1. primitive
2. biceps
3. unify
4. dimorphous
5. hemithorax

a. one-half or one side of the chest
b. having two forms
c. combine into one part
d. a muscle with two parts
e. excessive thirst

6. erythematous
7. melanoma
8. xanthocyte
9. cyanotic
10. polydipsia

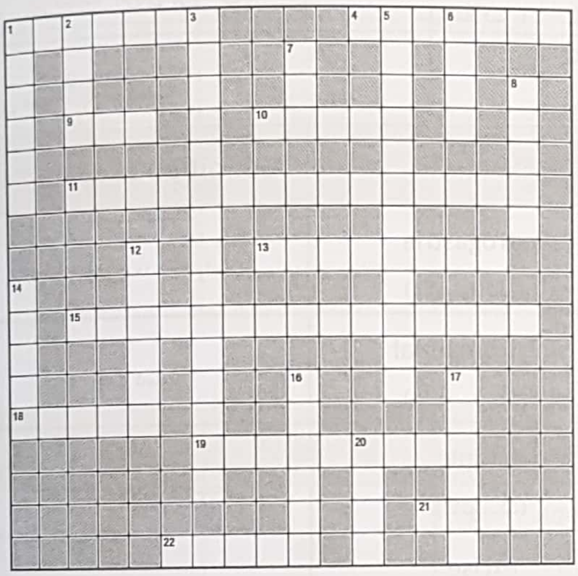
a. cell with yellow color
b. having a bluish discoloration
c. darkly pigmented tumor
d. red in color
e. white blood cell

11. telencephalon
12. hypovolemia
13. panplegia
14. prophase
15. diplopia

a. total paralysis
b. first stage of cell division
c. double vision
d. abnormally decreased amount of circulating in the body
e. endbrain

Answer: 1. E / 2. D / 3. C / 4. B / 5. A / 6. D / 7. C / 8. A / 9. B / 10. E / 11. E / 12. D / 13. A / 14. B / 15. C

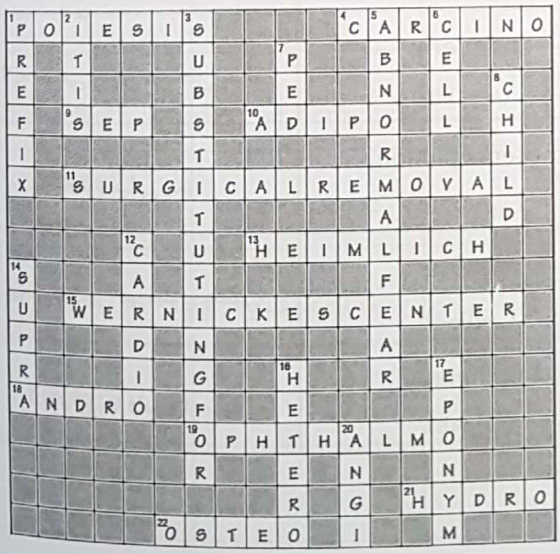
یه جدول هم حل کن از همین چیزا که یاد گرفتی!! شاید یه سری کلماتش رو بلد نباشی ولی همین باعث میشه یاد بگیری



Across

1. Suffix meaning *production*
4. Root for *cancer*
9. Root for *decay*
10. Root for *fat*
11. Suffix in ***splenectomy*** means this (two words)
13. An eponymic maneuver
15. An eponymic speech center in the brain (two words)
18. Root for *male*
19. Root for *eye*
21. Root for *water*
22. Root for *bone*

اینم پاسخش:



Down

1. Syllable attached to the beginning of a word
2. Suffix for ***inflammation***
3. ***Pro-*** means this (two words)
5. ***Phobia*** is a root meaning this (two words)
6. Second root in ***erythrocyte*** means this
7. Root of ***pediatric***
8. Meaning of root in 7 down
12. Root for *heart*
14. Prefix meaning *upon*
16. Prefix meaning *different*
17. Term for a word derived from a person's name
20. Root for *vessel*

فصل ۲ سلول، بافت و دستگاه‌های بدن

Unit 2 Cells, Tissues and Organ Systems

از یه درس ساده و بیسیک و ابتدایی شروع میکنیم. تو این درس کمی راجع به سلول و اندام‌ها و ریشه‌ها و پیشوند و پسوندهای مربوطه یاد میگیریم. متن زیر رو بخون و اگر کلمه ای رو نمیدونستی معنیش چی میشه از ستون سمت راست استفاده کن. یه نکته اینجا بگم که قرار نیست خط به خط ترجمه کنیا!!!! باید فقط متن و لغات و معنیشون رو بفهمی و باهاشون آشنا بشی. مخصوصا اصطلاحات بولد و پررنگ شده رو خوب بخون. طراح‌ها بخوان سوال زبان اختصاصی واژگان طرح کنن از همین مباحث سوال طرح میکنن.

■ ORGANIZATION

All organisms are built[1] from simple to more complex[2] levels. Chemicals form the materials that make up[3] cells, which are the body's structural and functional units. Groups of cells working together make up tissues, which in turn[4] make up the organs, which have specialized functions. Organs become components of the various systems, which together comprise[5] the whole organism.

۱- ساخته شدن / ۲- پیچیده
۳- ایجاد کردن
۴- به نوبه خود
۵- تشکیل دادن

■ THE CELL

The **cell** is the basic unit of living organisms. Cells accomplish[1] all the activities and produce all the components[2] of the body. They carry out[3] **metabolism**, the sum[4] of all the body's physical and chemical activities. They provide[5] the energy for metabolic reactions in the form of the chemical **adenosine triphosphate (ATP)**, commonly described as the energy compound of the cell. The main categories of organic compounds contained[6] in cells are:

- **Proteins**, which include the **enzymes**, some hormones, and structural[7] materials.
- **Carbohydrates**, which include sugars and starches[8]. The main carbohydrate is the sugar **glucose**, which circulates[9] in the blood to provide energy for the cells.
- **Lipids**, which include fats. Some hormones are derived[10] from lipids, and adipose (fat) tissue is designed[11] to store[12] lipids.

۱- انجام دادن
۲- اجزا
۳- انجام دادن
۴- جمع
۵- فراهم کردن
۶- شامل شدن
۷- ساختاری
۸- نشاسته
۹- در گردش بودن
۱۰- مشتق شدن از
۱۱- طراحی شدن
۱۲- ذخیره کردن

Within[1] the **cytoplasm** that fills[2] the cell are subunits called **organelles[3]**, each with a specific function. Diseases may affect[4] specific parts of cells. Cystic fibrosis and diabetes, for example, involve the plasma membrane. Other disorders originate[5] with mitochondria, the endoplasmic reticulum (ER), lysosomes, or peroxisomes.

The **nucleus[6]** is the control region of the cell. It contains the **chromosomes**, which carry genetic information. Each human cell, aside from[7] the reproductive (sex) cells, contains 46 chromosomes. These thread-like[8] structures are composed[9] of a complex organic substance, **deoxyribonucleic acid (DNA)**, which is organized into separate[10] units called **genes**. Genes control the formation of proteins, most particularly[11] enzymes, the catalysts[12] needed to speed the rate of metabolic reactions. To help manufacture[13] proteins, the cells use a compound called **ribonucleic acid (RNA)**, which is chemically related to DNA. Changes (mutations[14]) in the genes or chromosomes are the source of hereditary[15] diseases.

۱- درون / ۲- پر کردن
۳- اندامک‌ها
۴- اثر گذاشتن
۵- منشاء گرفتن
۶- هسته / ۷- به جز
۸- شبیه رشته
۹- تشکیل شدن
۱۰- جداگانه
۱۱- مخصوصا / ۱۲- کاتالیزوزها
۱۳- تولید
۱۴- جهش‌ها
۱۵- ارثی

When a body cell divides[1] by the process of **mitosis**, the chromosomes are doubled[2] and then equally[3] distributed[4] to the two daughter cells. When a cell is not dividing, it remains in a stage called *interphase*. In cancer, cells multiply[5] without control causing cellular overgrowth[6] and tumors. Reproductive cells (eggs and sperm) divide by a related process, meiosis, that halves[7] the chromosomes in preparation[8] for fertilization[9]. The study[10] of cells is **cytology** (سیتولوژی), based on the root *cyt/o*, meaning "cell."

۱- تقسیم شدن / ۲- دوبرابر شدن
۳- مساوی / ۴- توزیع شدن
۵- تکثیر شدن / ۶- رشد بیش از حد
۷- نصف شدن / ۸- آماده سازی
۹- لقاح / ۱۰- مطالعه

■ TISSUES

Cells are organized into four basic types of tissues that perform[1] specific functions:

1- Epithelial (اپیتلیال) tissue covers[2] and protects[3] body structures and lines organs, vessels, and cavities[4].

- Simple epithelium, composed of cells in a single layer, functions to absorb substances from one system to another, as in the respiratory and digestive tracts.
- Stratified epithelium, with cells in multiple layers, protects deeper tissues, as in the mouth and vagina. Most of the active cells in glands are epithelial cells.

2- Connective tissue supports and binds[5] body structures. It contains fibers and other nonliving material between the cells. Included in this category are blood, adipose (fat) tissue, cartilage, and bone.

3- Muscle tissue (root: my/o) contracts[6] to produce movement. There are three types of muscle tissue:

- Skeletal muscle moves the skeleton. It has visible[7] cross-bands, or striations[8], that are involved in contraction. Because it is under conscious[9] control, it is also called voluntary[10] muscle.
- Cardiac muscle forms the heart. It functions without conscious control and is described as involuntary.
- Smooth or visceral[11] muscle forms the walls of the abdominal organs; it is also involuntary.

Many organs described in later chapters on the systems have walls made of smooth muscle. The walls of ducts[12] and blood vessels also are composed mainly of smooth muscle.

4- Nervous tissue (root: neur/o) makes up the brain, spinal cord, and nerves. It coordinates[13] and controls body responses by the transmission[14] of electrical impulses[15]. The basic cell in nervous tissue is the neuron, or nerve cell.

۱- انجام دادن
۲- پوشش دادن
۳- محافظت کردن
۴- حفرات
۵- متصل کردن
۶- منقبض شدن
۷- قابل مشاهده
۸- خط، نوار
۹- آگاهانه
۱۰- ارادی
۱۱- احشایی
۱۲- مجاری
۱۳- هماهنگ کردن
۱۴- انتقال
۱۵- تکانه‌های الکتریکی

• Membranes

A **membrane** (ممبرین) is a simple, very thin, and pliable[1] sheet of tissue. Membranes may cover an organ, line a cavity, or separate one structure from another. Some secrete[2] special substances. Mucous membranes secrete **mucus**, a thick[3] fluid that lubricates[4] surfaces and protects underlying tissue, as in the lining of the digestive tract and respiratory passages. Serous membranes, which secrete a thin[5], watery fluid, line body cavities and cover organs. These include the membranes around the heart and lungs. Fibrous membranes cover and support organs, as found around the bones, brain, and spinal cord.

The study of tissues is **histology** (هیستولوژی), based on the root *hist/o*, meaning "tissue."

۱- انعطاف پذیر
۲- ترشح کردن
۳- غلیظ
۴- لیز کردن، چرب کردن
۵- رقیق

■ ORAGANS AND ORGAN SYSTEMS

Tissues are arranged into organs, which serve specific functions, and organs, in turn, are grouped[1] into systems. Grouped according to functions, the body systems are:

1- Circulation[2]:

- Cardiovascular system, consisting of the heart and blood vessels.
- Lymphatic system, organs, and vessels that aid circulation and help protect the body from foreign materials.

2- Nutrition and fluid balance:

- Respiratory system, which obtains[3] the oxygen needed for metabolism and eliminates[4] carbon dioxide, a byproduct of metabolism.
- Digestive system, which takes in, breaks down[5], and absorbs[6] nutrients and eliminates undigested waste.
- Urinary system, which eliminates soluble[7] waste and balances the volume and composition[8] of body fluids.

3- Production of offspring[9]: The male and female reproductive systems.

4-Coordination and control:

- Nervous system, consisting of the brain, spinal cord, and nerves, and including the sensory system. This system receives and processes stimuli[10] and directs responses.
- Endocrine system, consisting of individual glands that produce hormones.

5- Body structure and movement:

- Skeletal system, the bones and joints.
- Muscular system, which moves the skeleton and makes up organs. The muscular system and skeleton protect vital organs.

6- Body covering: The integumentary[11] system, which includes the skin and its associated structures, such as hair, sweat glands, and oil glands. This system functions in protection and also helps to regulate body temperature.

Bear in mind that the body functions as a whole; no system is independent of the others. They work together to maintain[12] the body's state of internal stability, termed **homeostasis** (هومئوستازیس).

۱- گروه بندی کردن
۲- گردش مواد
۳- گرفتن
۴- حذف کردن
۵- تجزیه کردن
۶- جذب کردن
۷- محلول در آب
۸- ترکیب
۹- نوزاد
۱۰- محرک‌ها
۱۱- پوششی
۱۲- حفظ کردن

خب حالا که متن درس رو خوندی، چند تا ریشه و پسوند مرتبط با همین درس یاد بگیریم. برات معنی هر بخش رو نوشتم و یه مثال با معنیش رو هم نوشتم. حتی نحوه خوندنشون رو هم واست نوشتم که دیگه حتی تلفظشون رو هم خوب یاد بگیری. اینا یه سری ریشه یا پسوند مربوط به **سلول‌ها و بافت‌ها** هستن:

Root or Suffix	Meaning	Example	Definition of Example
morph/o	شکل	polymorphous (پلی‌مورفس)	دارای چندین شکل
cyt/o cyte-	سلول	cytologist (سایتولوژیست)	کسی که روی سلول‌ها مطالعه میکند (سلول شناس)

Root or Suffix	Meaning	Example	Definition of Example
nucle/o	هسته	nuclear (نوکلئار)	مربوط به هسته
kary/o	هسته	karyotype (کاریوتایپ)	تصویر کروموزوم‌های سلول که بر اساس اندازه مرتب شده‌اند
,hist/o histi/o	بافت	histocompatibility (هیستوکامپتیبلیتی)	همخوانی بافت که اجازه پیوند می‌دهد
fibr/o	فیبر، رشته	fibrous (فیبروس)	تشکیل غیرطبیعی بافت فیبری
reticul/o	شبکه	reticulum (رتیکولوم)	یک شبکه
aden/o	غده	adenoma (آدنوما)	تومور (oma-) یک غده
papill/o	نوک پستان (نیپل)	papilla (پاپیلا)	برآمدگی که شبیه به نوک پستان است
myx/o	موکوس	myxadenitis (میکسادنایتیس)	التهاب (itis-) غده ترشح کننده موکوس
muc/o	موکوس، غشای مخاطی	mucorrhea (موکوره‌آ)	افزایش جریان (rhea-) موکوس
somat/o some-	جسم، جسم کوچک	chromosome (کروموزوم)	جسم کوچکی که رنگ می‌گیرد (رنگ = chrom/o)

اینا هم ریشه‌های مربوط به **فعالیت سلول‌ها** هستش:

Root	Meaning	Example	Definition of Example
,blast/o blast-	سلول نابالغ، سلول تولید کننده، سلول رویانی	histioblast (هیستیوبلاست)	یک سلول تشکیل دهنده بافت
gen	منشاء، تشکیل	karyogenesis (کاریوژنسیس)	تشکیل یک هسته
phag/o	خوردن، بلعیدن	autophagy (اتوفاژی)	خود تخریبی یک اندامک سلول
phil	جذب کردن (attract, absorb)	basophilic (بیزوفیلیک)	جذب کردن رنگ قلیایی
plas	تشکیل، شکل گیری، تکوین	hyperplasia (هایپرپلیژیا)	رشد بیش از حد یک اندام یا بافت

Root	Meaning	Example	Definition of Example
trop/o	اثر گذار روی	chronotropic (کرونوتروپیک)	اثر گذار روی زمان یا سرعت (chron/o = زمان)
troph/o	تغذیه، رشد، غذا دادن	atrophy (آتروفی)	زوال بافت، از بین رفتن بافت

ریشه‌هایی که تو این جدول بالاییه گفته شد معمولا با پسوندهای اسم ساز (-ia ، -y ، -in) یا پسوندهای صفت ساز (-ic) ترکیب میشن و ترکیب حاصل به عنوان انتهای یک کلمه به حساب میاد؛ یعنی وقتی مثلا trophy– اینو به چیز دیگه وصل میکنیم و حتما انتهای کلمه رو تشکیل میده. چند مثال بزنیم با همین کلمات: -genic، -philic، -tropin، -plasia، -trophy

یه سری ریشه‌های راجع به **بیوشیمی** یاد بگیر:

Root	Meaning	Example	Definition of Example
-ase	آنزیم	lipase (لیپیز)	آنزیم تجزیه کننده‌ی چربی (لیپید)
-ose	قند	lactose (لاکتوز)	قند شیر
hydr/o	آب، مایع	hydration (هیدراسیون)	افزودن آب، وجود مقدار نسبی آب
gluc/o	گلوکز	glucogenesis (گلوکوژنزیس)	تولید قند
glyc/o	قند، گلوکز	normoglycemia (نورموگلایسمیا)	سطح نرمال قند خون
sacchar/o	قند	polysaccharide (پلی‌ساکارید)	ترکیبی شامل چندین قند ساده
amyl/o	نشاسته	amyloid (آمیلوئید)	شبیه به نشاسته
lip/o	لیپید، چربی	lipophilic (لیپوفیلیک)	جذب کردن لیپید
adip/o	چربی	adiposuria (آدیپوزوریا)	حضور چربی در ادرار (ur/o)
steat/o	چرب	steatorrhea (استئاتوریا)	ترشح و تخلیه (rhea-) مدفوع چرب
prote/o	پروتئین	protease (پروتئیز)	آنزیم تجزیه کننده‌ی پروتئین

یه تمرین زیبا...

1. A dimorphic organ has two ____
2. Karyomegaly is enlargement (-megaly) of the ____
3. Adenitis is inflammation (-itis) of a ____
4. Myxoma is a tumor of tissue that secretes ____
5. the study (-logy) of morf
6. Hydrophobia is an aversion (-phobia) to ____ (aversion = بیزاری)
7. presence of glucose in the urine
8. treatment using water
9. fibrous tumor
10. cell with a very large nucleus
11. large body

Answer: 1. Shapes / 2. Nucleus / 3. Gland / 4. Mucus / 5. Morphology
6. Water / 7. Glucosuria / 8. Hydrotherapy / 9. Fibroma / 10. Megakaryocyte / 11. macrosomia

از این به هم وصل کنیدها هم حل کن ببینم!

__ 1. papilliform
__ 2. amorphous
__ 3. atrophy
__ 4. autotroph

A. resembling a nipple
B. wasting of tissue
C. organism that can manufacture its own food
D. having no specific form

Answer: 1. A / 2. D / 3. B / 4. C

حالا هم یه سری تست از این مبحث که تو علوم پایه‌های اخیر اومده بزنیم:

1. The fragmentation of chromatin and distribution of it throughout the cytoplasm as a result of nuclear disintegration is called .... (رفرم کرمان - شهریور ۹۸)
A) karyolysis
B) nucleoplasm
C) karyorrhexis
D) cytokinesis

2. Which of the following terms means "a decrease in all cells of the blood"? (قطب تبریز - شهریور ۹۷)
A) Leukopenia
B) Polycythemia
C) Polycytopenia
D) Thrombocytopenia

3. Which of the following is the definition for aphagia? (رفرم قطب همدان - شهریور ۹۸)
A) Extreme thirst
B) Difficulty hearing
C) Inability to swallow
D) Loss of hair

4. A chronotropic agent refers to: (کلاسیک قطب شیراز - شهریور ۹۸)
A) variations of color
B) variations of time
C) impacts due color
D) impacts due time

5. The following question be matched with only one of the symptoms: Do you have any trouble swallowing? (رفرم قطب شمال - شهریور ۹۸)
A) dysphasia
B) dysphagia
C) dysuria
D) dyspnea

6. Excessive amount of fat discharge in fecal matter made him bedridden with the diagnosis of ..... . (پزشکی کشوری اسفند ۹۹)
A) pyorrhea
B) steatorrhea
C) hematuria
D) hemorrhagia

7. Myxoma refers to a tumor that produce...........

قطب کرمان - اسفند ۹۵

A) marrow
B) myelin
C) mucus
D) muscle

8. Before you decide to donate one of your kidneys to a beloved one, you should perform a ......

قطب زنجان - اسفند ۹۵

A) Histocompatibility
B) Karyotype
C) Histopathology
D) hepatic function

9. In polychromasia, the............of erythrocytes is excessively varied due to variation in the hemoglobin content.

قطب کرمان - شهریور ۹۳

A) Size
B) Number
C) Color
D) Shape

10. A phagocytoblast is.................

قطب کرمان و تهران - شهریور ۹۳

A) A phagocyte unable to perform phagocytosis.
B) A cell which acts like a mature phagocyte.
C) An abnormal phagocyte.
D) A primitive cell developing into phagocyte.

11. The category of organic compounds that includes sugars and starches is the definition of ....

قطب اصفهان - اسفند ۹۳

A) Mitochondria
B) Cytoplasm
C) Carbohydrate
D) Chromosome

12. Reduced secretion of fatty material by the skin's sebaceous glands is referred to as ....

قطب آزاد - شهریور ۹۴

A) Adipocyte
B) Stearorrhea
C) Asteatosis
D) Lipophilic

Answers: 1. C / 2. C / 3. C / 4. D / 5. B / 6. B / 7. D / 8. A / 9. B / 10. D / 11. C / 12. C

اینم یه متن زیبا از «**پزشکی شهریور ۹۷ – قطب شیراز**». بزن ببین چطوریه!

Pound for pound, fat contains more energy than any other nutrient. So it's perhaps[1] not surprising that certain cancer cells show a clear preference[2] for growth in fatty tissues .According to a new study, melanomas prefer to grow near adipose (fat) tissue .Dr. white, the lead[3] researcher, and his colleagues[4] showed that melanomas actively take in lipids if given the chance, and they tend to migrate toward tissues rich in fat cells. "This is the seed-and-soil hypothesis[5]", White says. "Tumor cells like to go to places where there is fertile[6] soil. Based on our results, we think that adipose tissue can be very fertile soil for melanoma". <u>That</u> the presence of fat cells could help some cancer cells grow and spread sheds new light on the deepening connection between obesity[7] and cancer, and could offer a new grow and spread sheds new light on the deepening connection between obesity and cancer, and could offer a new avenue for treatment. For certain cancers, cutting off[8] the fat supply could be a means of fighting the disease.
Interestingly, the researchers did not set out to implicate[9] fat cancer: they stumbled[10] upon the connection. His team uses zebrafish as a model system for studying skin cancer. The small freshwater fish grow melanomas very similar to those in humans. The fish are also transparent, which makes it easy to track cancer cells as tumors progress[11] . "We did a screen to look for what helped melanoma cells grow in locations", White says. "When we looked at what was different in the melanoma cells growing at metastatic sites, we found a lot of changes in genes that regulate how cells use lipids."

۱- احتمالا
۲- ترجیح واضح
۳- اصلی
۴- همکاران
۵- فرضیه
۶- حاصلخیز
۷- چاقی
۸- حذف کردن
۹- دلالت کردن
۱۰- نامطمئن بودن، لغزیدن
۱۱- پیشرفت

1. **Which of the following CANNOT be understand from the text?**

A) Cancer calls like fat because it can be a good source of energy for their growth.

B) Melanomas are among cancer calls that clearly show their preference for fat calls.

C) Some cancer cells would even spend some energy to get access to the adipose tissue.

D) To fight cancer cells, we should provide them with as much "fertile soil" as they want.

2. **The underlined "that" (paragraph 1, line6)....**

A) Refers to "melanoma"(line 6)

B) Is the short form for "the fact that"

C) Refers to "fertile soil"(line 6)

D) Is a sentence connector and can be deleted

3. **Which statement is true about the findings of the study?**

A) They were expected because the researchers were originally interested to know about the connection between fat and cancer.

B) They hoped the researchers find out that pound for pound, fat contains more energy than other nutrients.

C) They showed that zebrafish grow melanomas in the same way as human beings do.

D) They suggested a practical way about how to fight cancer through weight management.

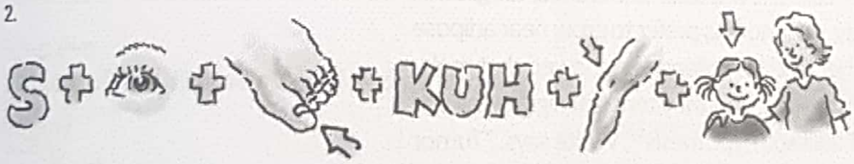
Answers: 1. D / 2. B / 3. D

اینم یه بازی کوچولو باحال!! ببین میتونی حدس بزنی که عکس داره چه کلمه‌ای رو میگه؟

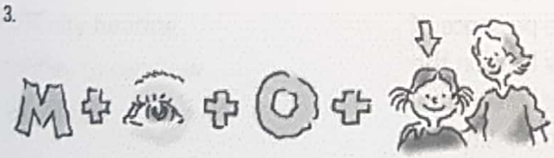
1.



2.



3.



Answer:

1. Mitochondria
2. Cytokinesis
3. Meiosis

فصل ۳ Unit 3

ساختار بدن
Body Structure

تو این درس میخوایم یکم راجع به جهت‌ها و موقعیت ساختارهای بدن صحبت کنیم. این درس پسوندها و پیشوندهای مهمی داره که تا آخر باهاته!!

■ ORGANIZATION

All healthcare fields[1] require[2] knowledge[3] of body directions and orientations. Physicians, surgeons, nurses, occupational therapists, and physical therapists, for example, must be thoroughly[4] familiar with the terms used to describe body locations and positions. Radiologic technologists must be able to position a person and direct x-rays to obtain suitable images for diagnosis.

۱- تخصص‌ها
۲- نیاز داشتن
۳- دانش
۴- کامل و دقیق

■ DIRECTIONAL TERM

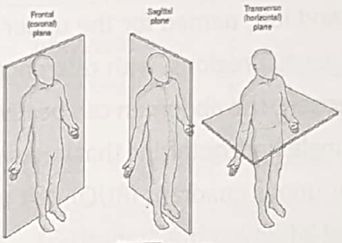


Figure 5-2 Planes of division.

In describing the location or direction of a given point in the body, it is always assumed that the subject is in the **anatomic position**, that is, upright[1], with face front[2], arms at the sides[3] with palms[4] forward[5] and feet parallel[6].

This figure on the right, illustrates[7] planes[8] of section[9], that is, directions in which the body can be cut. A **frontal plane**, also called a coronal plane, is made at right angles to the midline and divides the body into anterior[10] and posterior[11] parts. A **sagittal** (ساجیتال) **plane** passes from front to back and divides the body into right and left portions. If the plane passes through the midline, it is a midsagittal or medial[12] plane. A **transverse**[13] **(horizontal**[14]**) plane** passes horizontally, dividing the body into superior[15] and inferior[16] parts.

۱- ایستاده
۲- روبه رو
۳- کنار
۴- کف دست
۵- رو به جلو
۶- موازی
۷- به تصویر کشیدن
۸- صفحه‌ها
۹- مقطع
۱۰- قدام
۱۱- خلف
۱۲- میانی
۱۳- عرضی
۱۴- افقی
۱۵- فوقانی
۱۶- تحتانی

Term	Definition
anterior (ventral)	toward or at the front (belly) of the body
posterior (dorsal)	toward or at the back (dorsum) of the body
medial	toward the midline of the body
lateral	toward the side of the body
proximal	nearer to the point of attachment or to a given reference point
distal	farther from the point of attachment or from a given reference point
superior	above, in a higher position
inferior	below, in a lower position
cranial (cephalad)	toward the head
caudal	toward the lower end of the spine (Latin *cauda* means "tail"); in humans, in an inferior direction
superficial (external)	closer to the surface of the body
deep (internal)	closer to the center of the body

■ BODY CAVITIES

Internal[1] organs are located within dorsal[2] and ventral[3] cavities. The dorsal cavity contains the brain in the **cranial**[4] **cavity** and the spinal cord in the **spinal**[5] **cavity (canal)**. The uppermost[6] ventral space, the **thoracic**[7] **cavity**, is separated from the **abdominal**[8] **cavity** by the **diaphragm**, a muscle used in breathing. There is no anatomic separation between the abdominal cavity and the **pelvic**[9] **cavity**, which together make up the **abdominopelvic cavity**. The large membrane that lines the abdominopelvic cavity and covers the organs within it is the **peritoneum**[10] (پریتونیوم).

۱- داخلی / ۲- پشتی
۳- شکمی / ۴- جمجمه‌ای
۵- نخاعی / ۶- بالاترین
۷- قفسه سینه‌ای
۸- شکمی
۹- لگنی
۱۰- صفاق

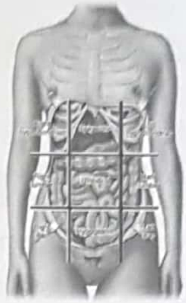
ABDOMINAL REGIONS

For orientation[1], the abdomen can be divided by imaginary[2] lines into nine regions—three medial regions and six lateral regions. The sections down the midline are the:

epigastric (اپی‌گاستریک) region, located above the stomach

umbilical (امبلیکال) region, named for the umbilicus[3], or navel[3]

hypogastric (هایپوگاستریک) region, located below the stomach



The lateral regions have the same name on the left and right sides. They are the:

hypochondriac (هایپوکاندریاک) regions, right and left, named for their positions near the ribs, specifically near the cartilages (root: *chondr/o*) of the ribs

lumbar (لومبار) regions, right and left, which are located near the small of the back (lumbar region of the spine)

iliac (ایلیاک) regions, right and left, named for the upper bone of the hip, the ilium; also called the inguinal (اینگوئینال) regions, with reference to the groin[4]

More simply, but less precisely, the abdomen can be divided into four sections by a single vertical line and a single horizontal line that intersect[5] at the umbilicus (navel). The sections are the right upper quadrant (RUQ), left upper quadrant (LUQ), right lower quadrant (RLQ), and left lower quadrant (LLQ).

۱- درک از موقعیت، جهت‌یابی

۲- فرضی

۳- ناف

۴- کشاله ران

۵- متقاطع شدن

اول از همه ریشه‌های مربوط به **سر و تنه** رو یاد بگیریم:

Root	Meaning	Example	Definition of Example
cephal/o	سر	Megacephaly (مگاسفالی)	بزرگی غیرطبیعی سر
cervic/o	گردن	cervicofacial (سرویکوفیشیال)	مربوط به گردن و صورت
thorac/o	قفسه سینه، توراکس	thoracotomy (توراکوتومی)	ایجاد برش (incision) در توراکس (-tomy = incision)
abdomin/o	شکم	intraabdominal (اینترا ابدامینال)	درون شکم
celi/o,	شکم	celiocentesis (سلیوسنتزیس)	سوراخ کردن شکم به کمک جراحی (centesis = puncture)
lapar/o	دیواره‌ی شکمی	laparoscope (لاپاروسکوپ)	ابزاری جهت مشاهده حفره‌ی صفاقی از طریق دیواره شکمی
lumb/o	منطقه کمری پایین کمر	thoracolumbar (توراکولومبار)	مربوط به قفسه سینه و کمر
periton, peritone/o	صفاق	peritoneal (پریتونئال)	مربوط به صفاق

دوم از همه ریشه‌های مربوط به **دست و پا** رو یاد بگیریم:

Root	Meaning	Example	Definition of Example
acro	اندام، انتها (Extermities)	acrocyanosis (اکروسیانوزیس)	تغییر رنگ اندام‌ها به آبی
brachi/o	بازو	antebrachium (آنته براکیوم)	ساعد
dactyl/o	انگشت دست، انگشت پا (finger، toe)	polydactyly (پلی‌داکتیلی)	داشتن انگشتان بیش از حد نرمال
ped/o	پا	pedometer (پدومیتر)	ابزاری جهت اندازه گیری قدم
pod/o	پا	podiatric (پودیاتریک)	مربوط به مطالعه و درمان پا

و سوم از همه پیشوندهای مربوط به **موقعیت و جهت** رو یاد میگیریم:

Root	Meaning	Example	Definition of Example
circum-	دور تا دور، اطراف	circumoral (سیرکامورال)	دور دهان
peri-	دور تا دور، اطراف	periorbital (پری‌اوربیتال)	دور حدقه چشم
intra-	در، درون (in, within)	intravascular (اینتراوسکولار)	درون یک رگ
epi-	روی (on, over)	epithelial (اپیتلیال)	اشاره به اپیتلیوم، بافتی که سطوح را می‌پوشاند
extra-	خارج	extrathrocic (اکستراتوراسیک)	خارج از توراکس (قفسه سینه)
infra-	زیر	infrascapular (اینفرااسکاپولار)	زیر اسکاپولا (کتف)
sub-	زیر، پایین	sublingual (ساب لینگوال)	زیر زبان (lingu/o)
inter-	بین	intercostal (اینترکوستال)	بین دنده‌ها (cost/o)
juxta-	مجاور، نزدیک	juxtaposition (ژوکستاپوزیشن)	پهلوی هم گذاری

Root	Meaning	Example	Definition of Example
para-	مجاور، نزدیک	parasagittal (پاراساجیتال)	نزدیک یا کنار صفحه ساجیتال
retro-	پشت، رو به پشت (Behind, backward)	retrouterine (رترویوترین)	پشت رحم
supra-	بالا	suprapatellar (سوپراپاتلار)	بالای پاتلا (کشکک زانو)

یه دونه به هم وصل کنید زیبا حل کن ببین چطوریه!

__ 1. thoracentesis
__ 2. acrodermatitis
__ 3. laparoscopy
__ 4. Dextropedal
__ 5. Caudal

A. surgical puncture of the chest
B. skin inflammation of the extremities
C. pertaining to the right foot
D. examination through the abdominal wall
E. toward the tail

__ 6. macropodia
__ 7. subdermal
__ 8. macrocephaly
__ 9. celiotomy
__ 10. circumcision

A. circular cut
B. excessive size of the feet
C. beneath the skin
D. abnormal largeness of the head
E. incision of the abdomen

Answer: 1. A / 2. B / 3. D / 4. C / 5. E / 6. B / 7. C / 8. D / 9. E / 10. A

حالا هم یه سری تست از این مبحث که تو علوم پایه‌های اخیر اومده بزنیم. درسته که تستای کم گذاشتم ولی این درس چون تو تمام درس‌های دیگه به کار میره واسه همین اونجا بهتر یاد میگیری همه رو.

1. Encephalomalacia is a term which is used in case of .... Of the brain.

پزشکی کشوری اسفند ۹۹

A) softening
B) drainage
C) discharge
D) atrophy

2. A cervical colar was placed on the victim to stabilize and immobilize the ....

قطب آزاد - اسفند ۹۵

A) uterus
B) pelvis
C) chin
D) neck

3. Adnexa refers to the ....

قطب شیراز و همدان - اسفند ۹۶

A) internal part of an organ
B) component parts of lymph
C) external layer of the tissue
D) accessory parts of a structure

4. The dissection directed anteroposteriorly was done ....

قطب آزاد - اسفند ۹۷

A) posterior - superior
B) circumferentially
C) front to back
D) top to bottom

5. "There's a painful swelling in my armpit", a patient complains. In anatomical terms, she is complaining of ....

A) enlarged axillary node
B) inguinal swelling
C) periumblical pain
D) pain in antecubital fossa

(axillary : زیربغل / swelling: تورم / antecubital: روی چین قدامی آرنج)

دوم قطب اهواز - شهریور ۹۷

6. A tube placed within the trachea is called ....

A) Intertracheal
B) Endotracheal
C) Intratracheal
D) Ectotracheal

قطب اراک - شهریور ۹۴

Answers: 1.A / 2.D / 3.D / 4.C / 5.A / 6.B

اینم یه متن کاملا بی‌ربط با این فصل فقط برای شما ☺ از « **پزشکی ریفرم و کلاسیک شهریور ۹۸- قطب زنجان** ». دلیل نمیشه نیارمش که!!

A hospital's transfusion[1] service is a good source[2] of information about the availability[3] and use of the latest transfusion devices. Using the right device ensures[4] maximal safety[5] and efficiency[6] in transfusing blood products.

Blood filters, integral to all transfusion sets, remove debris[7] from blood components. The transfusion service specifies the type of filter to use with a specifics blood component and in some institutions[8] selects it and issues[9] it with the blood product.

Specific filters are designed for specific transfusion situations. Using the wrong filter may remove or damage the component intended[10] for transfusion. A standard filter removes small clots[11] and other debris- specifically, degenerated platelets and leukocytes. For optimum[12] effectiveness, the entire filter must be covered with blood and not be in use longer than four hours. Microaggregate filters remove small clots that could slip through standard filters. Microaggregate filters remove up to %70 of leukocytes from a unit of RBCs provided the unit is one week to 10 days old and the leukocytes are first aggregated[13] into larger particles by hard centrifugation.

۱- انتقال خون
۲- منبع
۳- فراهمی
۴- تضمین کردن
۵- امنیت
۶- بازده و اثر
۷- بقایا
۸- موسسه‌ها
۹- مشکلات
۱۰- تعیین شده
۱۱- لخته‌ها
۱۲- بهینه و حداکثر
۱۳- جمع شدن

1. The safety of blood transfusion depends on .... .

A) Whether it is administered in the hospital or not.
B) The appropriateness of the devices used.
C) The availability of blood donors.
D) Whether the donor and recipient are well informed.

2. Blood filters are used ......

A) to analyze blood components
B) to detach red blood cells
C) in almost all transfusion systems
D) only for specifics transfusions

3. Leukocytes are first aggregated into larger particles by hard centrifugation and then .... . eliminate up to %70 of leukocytes from a unit of RBCs under circumstances.

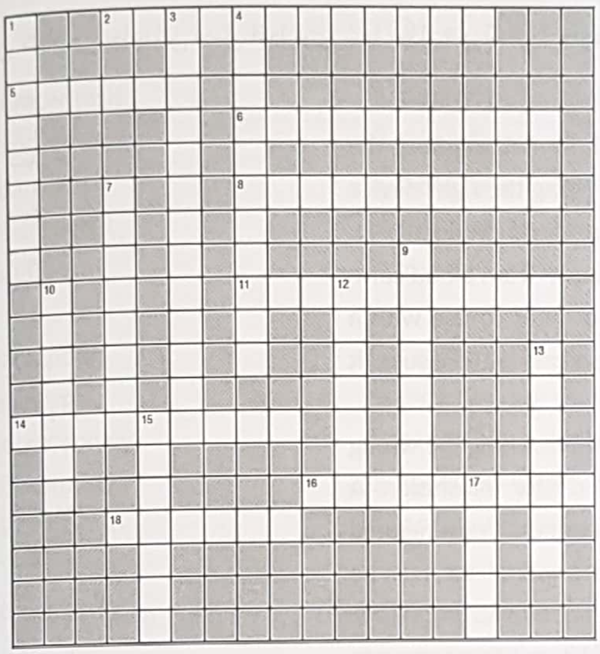
A) Standard filters
B) Microaggragate filters
C) Centrifuged filters
D) Integral filters

4. **Blood filters .... .**
A) take different types and forms
B) are incorporated into clots and debris
C) reduce optimum effectiveness
D) degenerate platelets and leukocytes

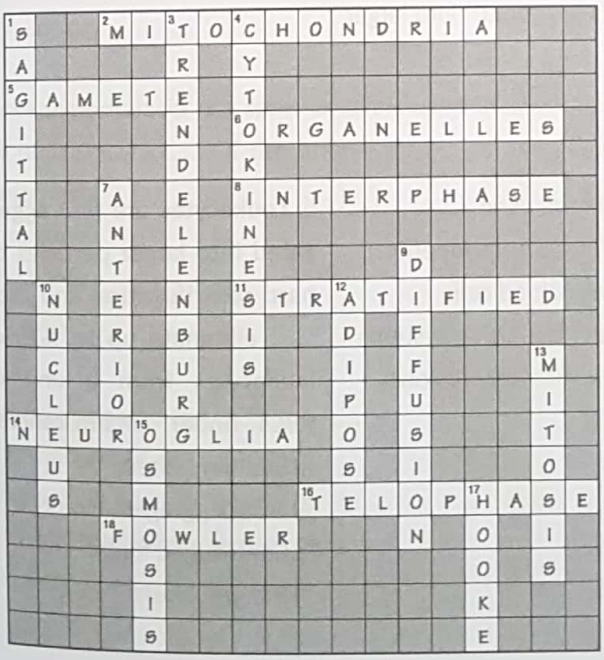
5. **The type of filter to be applied for specific blood component is determined by:**
A) Institutional Availability
B) Blood product
C) Optimum effectiveness
D) Transfusion service

Answers: 1. B / 2. C / 3. B / 4. A / 5. D

اینم یه جدول زیبا از مباحث مربوط به این فصل. ممکنه حالا یه سرپاشو بلد نباشی ولی یاد میگیری خب!



اینم جوابش:



Across

2. Site of adenosine triphosphate production
5. Only type of cell that undergoes meiosis
6. Name for the structures of a cell
8. Growth phase of mitosis
11. Type of epithelial tissue that has three or more layers
14. Support structure of nervous tissue
16. The final step of mitosis
18. Eponym for a position in which the head of the bed is raised and the patient's knees are slightly flexed

Down

1. One of three body reference planes
3. Eponym for a position in which the patient's head is lower than his body or legs
4. Cell movement
7. Word that means in front of
9. When solutes move from an area of higher concentration to an area of lower concentration
10. Largest organelle
12. Type of tissue in which a fat droplet occupies most of the cell
13. Process of cell division from the Greek word for thread
15. Passive transport method whose root comes from the Greek word meaning to push
17. Physicist to first coin the term cell

فصل ۴ بیماری

Unit 4 Disease

این درس یکی از مهم‌ترین درس‌ها هست! چون تقریبا پیشوند و پسوند تقریبا تمام بیماری‌ها رو توش یاد میگیری! حواستو جمع کن!

■ TYPES OF DISEASES

A disease is any disorder of normal body function. Diseases can be grouped into a number of different but often overlapping[1] categories.

- Infectious diseases are caused by certain harmful[2] **microorganisms** and other **parasites** that live at the expense[3] of another organism. Any disease-causing agent is described as a **pathogen**.
- Degenerative diseases result from wear and tear[4], aging, or **trauma** (injury[5]) that can lead to a **lesion**[6] (wound[7]) and perhaps **necrosis** (death of tissue). Common examples include arthritis, cardiovascular problems, and certain respiratory disorders such as emphysema. Structural malformations such as congenital malformations, **prolapse** (dropping[8]), or **hernia**[9] (rupture[10]) may also result in degenerative changes.
- **Neoplasia** is the abnormal and uncontrolled[11] growth of tissue.

۱- همپوشانی
۲- آسیب رسان
۳- به خرج چیزی
۴- سایدگی و پارگی
۵- آسیب
۶- ضایعه
۷- جراحت
۸- افتادگی
۹- هرنی
۱۰- پارگی
۱۱- کنترل نشده

- Immune disorders include failures[1] of the immune system, allergies, and autoimmune[2] diseases, in which the body makes antibodies to its own tissues.
- Metabolic disorders result from lack of enzymes or other factors needed for cellular functions. Many hereditary disorders fall into[3] this category. Malnutrition[4] caused by inadequate[5] intake of nutrients or inability[6] of the body to absorb and use nutrients also upsets metabolism.
- Hormonal disorders are caused by underproduction or overproduction of hormones or by an inability of the hormones to function properly. One common example is diabetes mellitus[7].
- Mental and emotional disorders affect the mind and adaptation[8] of an individual to his or her environment.
- The cause of a disease is its **etiology** (اتیولوژی), although many diseases have multiple interacting[9] causes. An **acute**[10] disease is sudden[11], severe, and of short duration[12]. A **chronic**[13] disease is of long duration and progresses slowly. One health profession that deals with the immediate effects of acute disease is the emergency medical technician (EMT).

۱- نارسایی، اختلال
۲- خودایمنی
۳- قرار گیری
۴- سوء تغذیه / ۵- ناکافی
۶- ناتوانی
۷- دیابت شیرین
۸- تطبیق
۹- تعامل، تقاطع
۱۰- حاد
۱۱- ناگهان
۱۲- مدت
۱۳- مزمن

■ INFECTIOUS DISEASES

Infectious diseases are caused by viruses, bacteria, fungi[1] (yeasts and molds), protozoa[2] (single-celled animals), and worms (helminths[3]). Infecting organisms can enter the body through several routes[4], or portals of entry, including damaged skin, respiratory tract, digestive system, and urinary and reproductive tracts. An infected person's bodily discharges[5] may contain organisms that spread infection through the air, food, water, or direct contact. Microorganisms often produce disease by means[6] of the **toxins** (poisons) they release. The presence[7] of harmful microorganisms or their toxins in the body is termed **sepsis**.

۱- قارچها (جمع: fungus)
۲- تک یاخته / ۳- کرم روده
۴- راه، روش
۵- ترشحات
۶- به وسیله
۷- حضور

• Bacteria

In shape, bacteria are:

(1) Round[1], or cocci (2) Rod-shaped[2], or bacilli (3) Curved[3], including vibrios and spirochetes

Bacteria may be named according to their shape and also by the arrangements[4] they form. They are also described according to the dyes[5] they take up when stained[6] in the laboratory[7]. The most common laboratory bacterial stain is the **Gram stain**, with which Gram-positive organisms stain purple and Gram-negative organisms stain red.

۱- گرد / ۲- استوانه‌ای
۳- خمیده / ۴- آرایش‌ها
۵- رنگ‌ها / ۶- رنگ آمیزی
۷- آزمایشگاه

■ RESPONSES TO DISEASE

• Inflammation

A common response to infection and to other forms of disease is **inflammation**[1]. When cells are injured, they release chemicals that allow blood cells and fluids to move into the tissues. This inflow[2] of blood results in the four signs of inflammation: Heat[3] + Pain + Redness[4] + Swelling[5]

The suffix *-itis* indicates inflammation, as in appendicitis (inflammation of the appendix) and tonsillitis (inflammation of the tonsils).

Inflammation is one possible cause of **edema**, a swelling or accumulation[6] of fluid in the tissues. Other causes of edema include fluid blockage[7], heart failure, and imbalance[8] in body fluid composition[9].

۱- التهاب
۲- جریان خون به داخل
۳- گرما
۴- قرمزی
۵- تورم
۶- تجمع
۷- انسداد / ۸- عدم تعادل
۹- ترکیب

• Phagocytosis

The body uses **phagocytosis** to get rid of invading[1] microorganisms, damaged cells, and other types of harmful debris. Certain white blood cells are capable of engulfing[2] these materials and destroying them internally. Phagocytic cells are found circulating in the blood, in the tissues, and in the lymphatic system. The remains of phagocytosis consist of fluid and white blood cells, a mixture[3] called **pus**[4].

۱- مهاجم
۲- بلعیدن، در بر گرفتن
۳- مخلوط
۴- چرک

• Immunity

Immunity[1] refers to all our defenses[2] against infectious disease. Inflammation and phagocytosis are examples of inborn or innate[3] protective mechanisms, which are based on a person's genetic makeup[4] and do not require any previous exposure to a disease organism. Other defenses that fall into this category are mechanical barriers[5], such as intact skin and mucous membranes, as well as body secretions, such as stomach acid and enzymes in saliva and tears[6].

۱- ایمنی / ۲- عوامل دفاعی
۳- ذاتی
۴- ترکیب
۵- سدهای مکانیکی
۶- اشک

Immunity that we develop during life from exposure to disease organisms is termed *adaptive immunity*, or acquired immunity. This type of immunity is specific for particular diseases encountered[1] by natural exposure or by the administration of vaccines. The system responsible for adaptive immunity consists of cells in the blood, lymphatic system, and other tissues. These cells recognize different foreign invaders and get rid of[2] them by direct attack and by producing circulating antibodies that immobilize and help destroy them. The immune system also monitors the body continuously[3] for abnormal and malfunctioning cells, such as cancer cells. The immune system may overreact[4] to produce allergies and may react to one's own tissues to cause autoimmune diseases.

۱- مواجه شدن
۲- خلاص شدن
۳- مداوم
۴- واکنش بیش از حد

■ NEOPLASIA

As noted earlier, a **neoplasm** is an abnormal and uncontrolled growth of tissue—a tumor or growth. A **benign**[1] neoplasm does not spread[2], that is, undergo **metastasis** to other tissues, although it may cause damage at the site where it grows. An invasive neoplasm that can metastasize to other tissues is termed **malignant**[3] and is commonly called *cancer*. A malignant tumor that involves epithelial tissue is a **carcinoma**. If the tumor arises in glandular epithelium, it is an adenocarcinoma (the root *aden/o* means "gland"); a cancer of pigmented epithelial cells (melanocytes) is a melanoma. A neoplasm that involves connective tissue or muscle is a **sarcoma**. Cancers of the blood, lymphatic system, and nervous system are classified according to the cell types involved and other clinical features.

Often mistaken for a malignancy is a **cyst**, a sac or pouch[4] filled with fluid or semisolid[5] material that is abnormal but not cancerous. Common sites for cyst formation are the breasts, the skin's sebaceous glands, and the ovaries. Causes of cyst formation include infection or blockage of a duct

۱- خوش‌خیم
۲- منتشر شدن، گسترش یافتن
۳- بدخیم
۴- کیسه
۵- نیمه جامد

آماده سیبیل عظیمی از ریشه‌ها و پیشوندها و پسوندها هستی؟؟؟؟ برو که رفتیم ...

الف) اینا سری ریشه مربوط به **بیماری** هستن.

Root	Meaning	Example	Definition of Example
alg/o, algi/o, algesi/o	درد	algesia (الجزیا)	وضعیت دارای درد
carcin/o	سرطان، کارسینوما	carcinoid (کارسینوئید)	شبیه به کارسینوما
cyst/o	کیسه یا ساک پرمایع کیست، مثانه	cystic (سیستیک)	مربوط به یا دارای کیست
lith	سنگ (کالکولوس)	lithiasis (لیتیازیس)	تشکیل سنگ
onc/o	تومور	oncogenic (اونکوژنیک)	ایجادکننده‌ی تومور
path/o	بیماری	pathogen (پاتوژن)	ارگانیسمی که بیماری ایجاد می‌کند
py/o	چرک (pus)	pyocyst (پایوسیست)	کیست پر از چرک
pyr/o, pyret/o	تب، آتش (fever)	pyrexia (پایرکسیا)	تب
scler/o	سخت، سفت (hard)	sclerosis (اسکلروزیس)	سفت شدن بافت
tox/o, toxic/o	سم	endotoxin (اندوتاکسین)	سم درون دیواره‌ی باکتری

نذاااار هوا بره لاش سریع یه تمرین کوچیک حل کن:

1. The study of toxins ____
2. pyorrhea means discharge of ____
3. A pyrogenic agent induces ____
4. Arteriosclerosis is a ____ of the arteries
5. A lithotomy is an incision to remave ____

Answer: 1. Toxicology / 2. Pus / 3. Fever / 4. Hardening/ 5. acalculus

ب) این پیشوندها هم مربوط به **بیماری** هستن:

Prefix	Meaning	Example	Definition of Example
-brady	آهسته	bradypnea (برادی‌پنه)	تنفس (-pnea) با سرعت آهسته
-dys	غیرطبیعی، دردناک، دشوار (difficult)	dysplasia (دیس‌پلازی)	رشد (plas) غیرطبیعی بافت
-mal	بد، ضعیف	malabsorption (مل ابزورپشن)	جذب ضعیف مواد مغذی (سوءجذب)
-pachy	ضخیم	pachycephaly (پلی‌سفالی)	ضخامت غیرطبیعی جمجمه
-tachy	سریع	tachycardia (تکی‌کاردیا)	ضربان قلب سریع
-xero	خشکی	xeroderma (زیرودرما)	خشکی پوست

هوااا هواا هوااا نرهههه

1. abnormal thickness of fingers
2. difficulty in swallowing
3. Abnormal nourishment (-trophy) of tissue
4. Rapid breathing
5. painful menstrual periods

Answer: 1. Pachydactyly / 2. Dysphagia / 3. Dystrophy / 4. Tachypnea/ 5. Dysmenorrhea

ج) این پسوندها هم مربوط به **بیماری** هستن:

Suffix	Meaning	Example	Definition of Example
-algia, -algesia	درد	neuralgia (نورالژیا)	درد در یک عصب
-cele	هرنی، اتساع موضعی (herniation)	gastrocele (گاستروسل)	فتق معده
-clasis, -clasia	تجزیه و تخریب (breaking)	karyoclasis (کاریوکلاسیس)	تجزیه هسته
-itis	التهاب (inflammation)	cystitis (سیستیتیس)	التهاب مثانه
-emesis	استفراغ (vomiting)	hyperemesis (هایپرمسیس)	استفراغ شدید، استفراغ بدخیم حاملگی

Suffix	Meaning	Example	Definition of Example
-megaly	بزرگی	hepatomegaly (هپاتومگالی)	بزرگی کبد
-odynia	درد	urodynia (اورودینیا)	درد هنگام ادرار
-oma[1]	تومور	lipoma (لیپوما)	تومور سلول‌های چربی
-pathy	هر بیماری	nephropathy (نفروپاتی)	هر بیماری کلیه
-rhage[2], -rhagia[2]	خونریزی، جریان وسیع	hemorrhage (هموریج)	جریان خون وسیع
-rhea[2]	جریان، ترشح (flow, discharge)	pyorrhea (پایوریا)	تخلیه ترشحات چرکی
-rhexis[2]	پارگی (rupture)	amniorrhexis (آمنیورکسیس)	پارگی کیسه آمنیون
-schisis	شکاف (fissure, splitting)	retinoschisis (رتیناسکیزیس)	جدا شدن شبکیه از چشم

دو تا نکته کوچیک میخواستم بگم:

۱- یکی راجع جمع بستن اسم‌های منتهی به oma- که میتونیم از omas- یا omata- استفاده کنیم.

۲- یکی هم راجع به پسوندهایی که با (r) شروع میشن. دقت کنیم که زمانی که این پسوندها رو به کلمه‌ای اضافه کردیم، دوتا (r) بذاریم. یعنی اینجوری بشه: rrhage- ، rrhea- و ...

این دفعه یه به هم وصل کنی سریع حل کن:

__ 1. gastrodynia
__ 2. meno metrorrhagia
__ 3. hydrocele
__ 4. cephalgia
__ 5. hepatorrhexis
__ 6. steatorrhea

A. local dilation containing fluid
B. pain in the stomach
C. pain in the head
D. excessive uterine bleeding
E. rupture of the liver
F. Disdarge of fatty stools (or feces)

Answer: 1. B / 2. D / 3. A / 4. C / 5. E / 6. F

ج) این کلمات به تنهایی به کار میرن اما میتونن به عنوان پسوند مربوط به **بیماری** باشن:

Word	Meaning	Example	Definition of Example
dilation, dilatation	اتساع، گشاد شدن	vasodilation (ویزودایلیشن)	متسع شدن عروق خونی
ectasia, ectasis	اتساع، متسع شدن (Distention)	gastrectasia (گاسترکتیزیا)	اتساع معده

Word	Meaning	Example	Definition of Example
edema	تجمع مایع، تورم	cephaledema (سفالدما)	تورم سر
lysis	جدا کردن، آزاد کردن حل کردن، تخریب کردن	dialysis (دیالیسیس)	جدایی مواد با عبور از طریق یک غشا
malacia	نرمی (softening)	craniomalacia (کرانیومالاسیا)	نرمی جمجمه
necrosis	مرگ بافت	osteonecrosis (اوستئونکروزیس)	مرگ بافت استخوان
ptosis	افتادگی، جابه جایی به پایین (prolapse)	blepharoptosis (بلفاروپتوزیس)	افتادگی پلک (blephar/o)
sclerosis	سخت و سفت شدن	phlebosclerosis (فلبواسکلروزیس)	سفت شدن ورید
spasm	انقباض ناگهانی، کرامپ	arteriospasm (آرتریواسپاسم)	اسپاسم یک شریان
stasis	سرکوب، توقف	menostasis (منواستازیس)	مهار جریان قاعدگی
stenosis	تنگی، باریک شدگی	bronchostenosis (برونکواستنوزیس)	تنگی برونش (نایژه)
toxin	سم	nephrotoxin (نفروتوکسین)	مواد سمی یا آسیب رسان برای کلیه

یه تمرینم از این جدول:

__ 1. myolysis
__ 2. osteomalacia
__ 3. cardionecrosis
__ 4. hemolysis
__ 5. hemostasis

A. destruction of blood cells
B. death of heart tissue
C. stoppage of blood flow
D. softening of a bone
E. dissolving of muscle

Answer: 1. E / 2. D / 3. B / 4. A / 5. C

د) اینا هم یه سری ریشه و پیشوند برای مربوط به **بیماری‌های عفونی** هستن:

Word	Meaning	Example	Definition of Example
staphylo-	خوشه شکل انگور	staphylococcus (استافیلوکوکوس)	یک باکتری گرد که خوشه تشکیل می‌دهد
strepto-	زنجیره پیچ خورده	streptobacillus (استرپتوباسیلوس)	یک باکتری میله‌ای که زنجیر تشکیل میدهد

Word	Meaning	Example	Definition of Example
bacill/o, bacill/i	باکتری	bacilluria (باسیلوریا)	باسیل در ادرار (uria-)
bacteri/o		bacteriostatic (باکتریواستاتیک)	توقف (statis) رشد باکتری
myc/o	مخمر، قارچ	mycotic (مایکوتیک)	مربوط به قارچ
vir/o	ویروس	viremia (ویرمیا)	حضور ویروس در خون

به تمرین هم از این یکی جدول:

1. A bactericidal agent kills ____
2. study of fungi
3. study of viruses
4. A mycosis is any disease caused by a ___

Answer: 1. Bacteria / 2. Mycology / 3. Virology / 4. Fungus

تست این مبحث خیلی زیاده ولی ما فقط چندتاشو میذاریم اینجا بقیشم تو بقیه درسا یاد میگیری.

1. What does the medical term "dermatomycosis" mean? (قطب شهید بهشتی - شهریور ۹۷)

A) Accumulation of pus under the skin
B) Infection of the skin caused by fungi
C) Muscle infection under the skin
D) Hemorrhagic area under the skin

2. A cystoscope is an instrument used most commonly by which of the following specialists? (کلاسیک قطب مشهد = شهریور ۹۸)

A) Endocrinologist
B) Gastroenterologist
C) Dermatologist
D) Urologist

3. A malignant neoplasm arising from muscle or connective tissue is a (an) .... (قطب آزاد - شهریور ۹۴)

A) Melanoma
B) Osteoma
C) Sarcoma
D) Carcinoma

4. The term for a condition or disease of unknown etiology is: (قطب مشهد - شهریور ۹۶)

A) acute
B) chronic
C) idiopathic
D) iatrogenic

5. Condition of profound ill health,malnutrition and wasting is referred to as .... (قطب تبریز - شهریور ۹۷)

A) achalasia
B) dyspepsia
C) cachexia
D) dysarthria

6. The word in the case studies that means "protrusion of an organ through an abnormal body opening" is .... (قطب شمال - شهریور ۹۷)

A) Hernia
B) Stenosis
C) Neoplasm
D) Myolysis

7. He was diagnosed with .... because of acute inflammatory, purulent bacterial dermatitis.

رفرم میاندوره کشوری - آذر ۹۸

A) xeroderma
B) scieroderma
C) pyoderma
D) lipoderma

9. Sialolithiasis refers to the formation of stones in the ....

قطب کرمان - اسفند ۹۸

A) Salivary glands
B) Urinary bladder
C) Lacrimal glands
D) Gall bladder

8. An antipyretic is used to?

رفرم قطب زنجان - شهریور ۹۸

A) Prevent a cold
B) Aid in digestion
C) Treat an infection
D) Treat a fever

10. The patient with intractable pain was referred to the hospital where the surgeon decided that he undergo .... to destroy and breakdown the nerve.

رفرم میان دوره کشوری - آذر ۹۸

A) neuralgia
B) neurolysis
C) neurogenesis
D) neurotropic

Answers: 1. B / 2. D / 3. C / 4. C / 5. C / 6. A / 7. C / 8. D / 9. A / 10. A

اینم یه متن از « **پزشکی اسفند ۹۹**» که راجع به دیابته.

Diabetes mellitus[1](DM) is a chronic[2] disease with a global prevalence[3] that continues to grow and is associated with both a significant individual and public health burden. Lifestyle modifications including medical nutritional therapy remain the cornerstones of successful management of DM , in conjunction with glucose-lowering medications when indicated. In addition, education on the principles of physical activity, on the need for self-monitoring[4] of blood glucose , and on the adjustment[5] of appropriate medications during times of illness[6], for example , are vital[7] to the person with DM. The multidisciplinary[8] health care team should work together with the patient with DM to achieve good glycemic control ,attain optimum[9] serum lipid levels and blood pressure , and maintain[10] a desirable body weight , as well as other risk factor modifications to prevent[11] the development of long-term complications of DM and reduce[12] the morbidity and mortality[13] associated with this chronic disease.

۱- دیابت شیرین
۲- مزمن
۳-شیوع جهانی
۴-نظارت بر خود
۵-تنظیم - تعدیل
۶- بیماری
۷- حیاتی
۸-وابسته به چند رشته علمی
۹- مقدار مطلوب
۱۰- حفظ کردن
۱۱- جلوگیری کردن
۱۲- کاهش دادن
۱۳- مرگ و میر

1. Diabetes mellitus .... recent advances in medicaments.

A) has already been controlled with
B) is still on the rise in spite of
C) is limited to certain regions owing to
D) has little impact on social health due to

2. Glucose-lowering medications .... in treating DM

A) are to be permanently followed
B) are more important than lifestyle changes
C) should precede nutritional therapy
D) should accompany medical nutritional therapy if necessary

3. Methods of monitoring blood glucose, and adjusting suitable medications during times of illness....... .

A) should be done by a medical doctor
B) can be taught to the person with DM
C) is to be performed in health centers
D) is to be excluded from the treatment plan

4. Treating a person with a DM is viewed, in this paragraph, as a/an ....

A) short term effort
B) ineffective undertaking
C) sole change in lifestyle
D) long lasting procedure

5. The text implies that with proper treatment, DM........ .

A) will seldom be inherited from parents
B) can be eradicated in short term
C) can be controlled though still present
D) will become a non-communicable disease

Answers: 1. B / 2. D / 3. B / 4. D / 5. C

میخواستم یه بازی و جدول دیگه هم بذارم ولی نمیذارم. الان عصبانی‌ام

فصل ۵ تشخیص و درمان؛ جراحی

Unit 5 Diagnosis and Treatment; Sugery

این درس یکی از مهم‌ترین درس‌ها هست! چون تقریبا پیشوند و پسوند تقریبا تمام بیماری‌ها رو توش یاد میگیری! حواستو جمع کن!

■ INTRODUCTION

Medical care begins with assessing[1] a disorder using information gathered[2] from the patient and a variety of testing and examination[3] methods[4]. Based on these results, a course[5] of treatment is recommended[6] that may include surgery.

۱-ارزیابی / ۲-جمع آوری کردن
۳- معاینه / ۴- روش‌ها
۵- مسیر / ۶- توصیه شدن

■ DIAGNOSIS

Medical **diagnosis**, the determination[1] of the nature and cause of an illness, begins with a patient history[2]. This includes a history of the present illness with a description[3] of **symptoms**[4] (evidence of disease), a past medical history, and a family and a social history.

A physical examination, which includes a review[5] of all systems and observation[6] of any **signs**[7] of illness, follows the history taking. Practitioners use the following techniques in performing[8] physicals:

- **Inspection[9]:** visual examination
- **Palpation[10]:** touching the surface of the body with the hands or fingers
- **Percussion[11]:** tapping the body to evaluate tissue according to the sounds produced
- **Auscultation[12]:** listening to body sounds with a stethoscope.

۱- تعیین / ۲- شرح حال
۳- توضیح / ۴- علائم
۵- بررسی / ۶- مشاهده
۷- نشانه‌ها
۸- انجام دادن
۹- معاینه
۱۰- لمس
۱۱- دق
۱۲- سمع

Vital[1] signs (VS) are also recorded[2] for comparison[3] with normal ranges. VS are measurements that reflect[4] basic functions necessary to maintain[5] life and include:

- Temperature[6] (T).
- Pulse rate, measured in beats per minute (bpm). Pulse rate normally corresponds[7] to the heart rate (HR), the number of times the heart beats[8] per minute.
- Respiration rate (R), measured in breaths per minute.
- Blood pressure (BP), measured in millimeters of mercury (mm Hg) and recorded when the heart is contracting (systolic pressure) and relaxing (diastolic pressure). An examiner typically uses a **stethoscope** and a blood pressure cuff, or **sphygmomanometer** (اسفیگمومانومیتر), to measure blood pressure. Newer devices that read blood pressure directly and give digital readings are also in use.

۱- حیاتی
۲- ثبت کردن
۳- مقایسه کردن
۴- منعکس کردن
۵- حفظ کردن
۶- دما
۷- رابطه داشتن، مطابق بودن
۸- ضربان

Additional tools used in physical examinations include the **ophthalmoscope**, for examination of the eyes; the **otoscope,** for examination of the ears; and hammers[1] for testing reflexes.

The skin, hair, and nails provide easily observable indications[2] of a person's state of health. Skin features such as color, texture[3], thickness, and presence of lesions (local injuries) are noted throughout the course of the physical examination.

Diagnosis is further aided[4] by laboratory test results. These may include tests on blood, urine, and other body fluids and the identification of infectious organisms. Additional tests may include study of the electrical activity of tissues such as the brain and heart, examination of body cavities by means of an **endoscope**, and imaging techniques. **Biopsy**[5] is the removal of tissue for microscopic examination. Biopsy specimens can be obtained by:

- Needle withdrawal (aspiration) of fluid, as from the chest or from a cyst
- A small punch, as of the skin
- Endoscopy, as from the respiratory or digestive tract
- Surgical removal, as of a tumor or node

۱- چکش
۲- نشانه، علامت
۳- بافت و الگو
۴- کمک شدن
۵- نمونه برداری

In some cases, cancer can be diagnosed and its treatment monitored by a *liquid biopsy*, which relies on[1] analysis of cancerous cells or tumor DNA in circulating blood. These samples are easier to obtain, may give a more complete picture of tumor spread than isolated tissue biopsies, and may someday be used as screening tests for hard-to-diagnose types of cancer.

۱- تکیه داشتن بر

• Imaging Techniques

Imaging techniques employ[1] various types of energy to produce visual images of the body. The most fundamental[2] imaging method is **radiography**, which uses x-rays to produce an image (radiograph) on film or to produce a digital image that can be viewed on a monitor. Radiography is the preferred method for imaging dense[3] tissues, such as bone. Some soft-tissue structures can be demonstrated[4] as well, but a contrast[5] medium, such as a barium mixture, may be needed to enhance[6] visualization. Other forms of energy used to produce diagnostic images include sound waves, radioactive isotopes, radio waves, and magnetic fields.

۱- به کار گرفتن
۲- پایه‌ای
۳- متراکم
۴- نشان دادن
۵- ماده حاجب
۶- تقویت کردن

■ TREATMENT

If diagnosis so indicates, treatment, also termed **therapy**[1], is begun. This may consist of counseling[2], drugs, surgery, radiation, physical therapy, occupational therapy, psychiatric treatment, or some combination[3] of these. **Palliative therapy**[4] is treatment that provides relief[5] but is not intended as a cure[6]. Terminally[7] ill patients, for example, may receive treatment that eases pain and provides comfort but is not expected to change the outcome[8] of the disease. During diagnosis and throughout the course of treatment, a patient is evaluated to establish a **prognosis**[9]—that is, a prediction of the disease's outcome.

۱- درمان/ ۲- مشاوره کردن
۳- ترکیبی از
۴- درمان تسکینی، درمان حمایتی
۵- آسایش / ۶- درمان قطعی
۷- شدید / ۸- نتیجه
۹- پیش‌آگهی

• Surgery

Surgery is a method for treating disease or injury by manual operations. Surgery may be done through an existing body opening, but usually it involves cutting[1] or puncturing[2] tissue with a sharp[3] instrument in the process of **incision**[4]. Surgery usually requires some form of **anesthesia**[5] to dull[6] or eliminate pain. After surgery, incisions must be closed for proper healing. Traditionally, surgeons have used stitches[7] or **sutures** to close wounds, but today they also use adhesive strips[8], staples[9], and skin glue.

Many types of operations are now performed with a **laser**, an intense beam of light. Some procedures require destruction of tissue by a harmful agent, such as by heat or a chemical, in the process of **cautery**[10] or cauterization. Surgeons are now increasingly using computer-assisted robotic surgery for certain procedures. In this type of operation, the surgeon uses robotic instruments manipulated[11] remotely[12] or by a computer. These operations can be less invasive than standard surgeries and result in less bleeding. The method has been used mainly for urogenital procedures, some joint replacement, correction of certain heart abnormalities, and gallbladder removal.

۱- بریدن / ۲- سوراخ کردن
۳- تیز / ۴- برش به کمک جراحی
۵- بی‌هوشی، بی‌حسی
۶- کاهش شدت
۷- بخیه
۸- نوار
۹- گیره
۱۰- سوزاندن
۱۱- اداره کردن
۱۲- از راه دور

Some of the purposes of surgery include:

- Treatment: For **excision**[1] (cutting out) of diseased or abnormal tissue, such as a tumor or an inflamed appendix. Surgical methods are also used to repair wounds or injuries, as in skin grafting[2] for burns or for realigning broken bones. Surgical methods are used to correct circulatory problems and to return structures to their normal positions, as in raising a prolapsed[3] organ, such as the urinary bladder, in a surgical **fixation** procedure.
- Diagnosis: To remove tissue for laboratory study in a biopsy, as previously described. Exploratory surgery[4] to investigate the cause of symptoms is performed less frequently now because of advances in noninvasive diagnostic and imaging techniques.
- Restoration: Surgery may compensate[5] for lost function, as when a section of the intestine is redirected in a colostomy, a tube is inserted to allow breathing in a tracheostomy, a feeding tube is inserted, or an organ is transplanted. Surgeons may perform plastic or reconstructive surgery to accommodate[6] a prosthesis (substitute[7] part), to restore proper appearance, or for cosmetic reasons.
- Relief: Palliative surgery relieves pain or discomfort, as by cutting the nerve supply to an organ or reducing the size of a tumor to relieve pressure.

۱- برداشت، خارج کردن
۲- پیوند پوست
۳- افتادگی
۴- جراحی اکتشافی
۵- جبران کردن
۶- جاسازی کردن و تطبیق دادن
۷- مصنوعی

Surgery may be done in an emergency or urgent[1] situation under conditions of acute danger, as in traumatic injury or severe blockage. Other procedures, such as cataract removal from the eye, may be planned when convenient[2]. Elective or optional surgery[3] would not cause serious consequences if delayed or not done.

Over time, surgery has extended beyond the classic operating room of a hospital to other hospital areas and to private surgical facilities where people can be treated within one day as outpatients. Preoperative care is given before surgery and includes examination, obtaining the patient's informed consent[4] for the procedure, and preadmission testing. Postoperative care includes recovery from anesthesia, follow-up evaluations, and instructions for home care.

۱- اورژانسی
۲- مناسب
۳- جراحی اختیاری
۴- رضایت آگاهانه

ALTERNATIVE AND COMPLEMENTARY MEDICINE

During the past century, the leading causes of death in industrialized countries have gradually shifted from infectious diseases to chronic diseases of the cardiovascular and respiratory systems and cancer. In addition to advancing age, life habits and the environment greatly influence these conditions. As a result, many people have begun to consider healing practices from other philosophies and cultures as alternatives[1] and complements[2] to conventional[3] Western medicine. Some of these philosophies include **osteopathy**, **naturopathy**, **homeopathy**, and **chiropractic**. Techniques of **acupuncture**, **biofeedback**, **massage**, and **meditation** may also be used, as well as herbal remedies[4] and nutritional counseling on diet, vitamins, and minerals. Complementary and alternative therapies emphasize[5] maintaining health rather than treating disease and allowing the body opportunity to heal itself. These ideas fit into the concept of **holistic healthcare**[6], which promotes treating an individual as a whole with emotional, social, and spiritual needs in addition to physical needs and encouraging people to be involved in their own health maintenance.

۱- جایگزین
۲- مکمل
۳- مرسوم
۴- داروهای گیاهی
۵- تاکید داشتن
۶- مراقبت از سلامت جامع نگر

CANCER

Methods used in the diagnosis of cancer include physical examination, biopsy, imaging techniques, and laboratory tests for abnormalities, or "markers," associated with specific types of malignancies. Some cancer markers are byproducts[1], such as enzymes, hormones, and cellular proteins, that are abnormal or are produced in abnormal amounts. Researchers have also linked specific genetic mutations to certain forms of cancer.

Oncologists (cancer specialists) use two methods, **grading** and **staging**, to classify cancers, select and evaluate therapy, and estimate[2] disease outcome. Grading is based on histologic (tissue) changes observed in tumor cells when they are examined microscopically. Grades increase from I to IV with increasing cellular abnormality.

۱- محصولات فرعی
۲- تخمین زدن

Staging is a procedure for establishing the clinical extent[1] of tumor spread, both at the original site and in other parts of the body (metastases). The TNM system is commonly used. These letters stand for primary tumor (T), regional[2] lymph nodes (N), and distant[3] metastases (M). Evaluation in these categories varies for each type of tumor. Based on TNM results, a stage ranging in severity from I to IV is assigned[4]. Cancers of the blood, lymphatic system, and nervous system are evaluated by different standards.

The most widely used methods for treatment of cancer are surgery, radiation therapy, and **chemotherapy** (treatment with chemicals). Newer methods of **immunotherapy** use substances that stimulate the immune system as a whole or vaccines prepared specifically against a tumor. Hormone therapy may also be effective against certain types of tumors. When no active signs of the disease remain, the cancer is said to be in **remission**[5].

۱- گسترش از نظر بالینی
۲- منطقه‌ای
۳- دور
۴- اختصاص دادن، معین کردن
۵- بهبودی

اینجا حالا مثل فصل قبل سیل عظیم نیست ولی چیزی از بزرگ بودن و مهم بودنش کم نمیکنه!

الف) اینا سری ریشه مربوط به **نیروهای فیزیکی** هستن.

Root	Meaning	Example	Definition of Example
aer/o	هوا، گاز	aerobic (ایروبیک)	مربوط به یا نیاز به هوا (اکسیژن)
bar/o	فشار	barometer (بارومیتر)	ابزاری جهت اندازه گیری فشار
chrom/o, chromate/o	رنگ (color, stain)	chromatic (کروماتیک)	دارای رنگ
chron/o	زمان	chronologic (کرونولاجیک)	مرتب شدن براساس زمان وقوع
cry/o	سرما	cryoprobe (کرایوپروب)	ابزاری جهت اعمال سرمای شدید
electr/o	الکتریسیته	electrolysis (الکترولاییسیس)	تجزیه یک ماده به وسیله جریان برق
erg/o	کار	synergistic (سینرژیستیک)	کار کردن کنار هم همراه با افزایش اثر
phon/o	صدا، صوت	phonograph (فونوگراف)	ابزاری جهت تولید مجدد صدا
phot/o	نور	photoreaction (فوتوری‌اکشن)	پاسخ به نور
radi/o	اشعه، x-ray	radiology (ریدیالوژی)	مطالعه و استفاده از رادیاسیون (اشعه)
son/o	صوت	sonogram (سونوگرام)	مدرک گرفته شده به وسیله سونوگرافی
therm/o	گرما، دما	hypothermia (هایپوترمیا)	دمای پایین بدن به طور غیرطبیعی

اون داستان هوا و لاش و این حرفا. درنتیجه سری حل کن این تمرین رو:

__ 1. hyperthermia
__ 2. hyperbaric
__ 3. synchrony
__ 4. radioactive
__ 5. chromocyte

A. abnormally high body temperature
B. any pigmented cell
C. pertaining to increased pressure
D. occurrence at the same time
E. giving off radiation

Answer: 1.A / 2.C / 3.D / 4.E / 5.B

ب) این هم یه سری پسوند مربوط به **تشخیص** هستن:

Suffix	Meaning	Example	Definition of Example
-graph	ابزار جهت ثبت داده‌ها	polygraph (پلی گراف)	ابزاری جهت ثبت بسیاری از پاسخ‌های فیزیولوژیک به طور همزمان، دروغ سنج
-graphy	عمل ثبت و تفسیر داده‌ها	echography (اکوگرافی)	ثبت داده گرفته شده توسط اولتراسوند (فراصوت)
-gram[1]	یک داده ثبت شده	electrocardiogram (الکتروکاردیوگرام)	ثبت فعالیت الکتریکی قلب
-meter	ابزار جهت اندازه گیری	calorimeter (کالریمیتر)	ابزاری جهت اندازه گیری کالری غذا
-metry	اندازه گیری چیزی	audiometry (اودیومتری)	اندازه گیری شنوایی (audi/o)
-scope	ابزار جهت مشاهده یا معاینه	bronchoscope (برونکوسکوپی)	ابزاری جهت معاینه نایژه‌ها
-scopy	معاینه‌ی چیزی	celioscopy (سلیواسکوپی)	معاینه حفره شکمی (celi/o)

۱- تصویری که توسط x-ray گرفته شده باشد، radiograph خوانده می‌شود.. اگر تکنیک خاصی استفاده شده باشه تا یک تصویر به کمک x-ray گرفته شود، از gram – استفاده میکنیم. مثلا urogram (دستگاه ادراری)، angiogram (عروق خونی).

یه تمرینم اینجا حل کن:

__ 1. microscope
__ 2. ergometry
__ 3. thermometer
__ 4. laparoscopy
__ 5. sonogram

A. examination of the abdomen
B. a record of sound
C. measurement of work done
D. instrument for measuring temperature
E. instrument for examining very small object

Answer: 1. E / 2. C / 3. D / 4. A / 5. B

ج) این پسوندها هم مربوط به **جراحی** هستن:

Suffix	Meaning	Example	Definition of Example
-centesis	سوراخ کردن، مایع کشیدن (puncture, tap)	thoracentesis (توراسنتزیس)	سوراخ کردن قفسه سینه
-desis	اتصال، ادغام	pleurodesis (پلورودسیس)	اتصال پلور (پرده جنب)
-ectomy	برش، برداشت به کمک جراحی (excision)	hepatectomy (هپاتکتومی)	برداشت بافت کبد

Suffix	Meaning	Example	Definition of Example
-pexy	ثابت سازی (fixation) به کمک جراحی	hysteropexy (هیستروپکسی)	فیکساسیون رحم
-plasty	جراحی پلاستیک، ترمیم، بازسازی (restoration)	rhinoplasty (رینوپلاستی)	جراحی پلاستیک بینی
-rhaphy	بخیه زدن، ترمیم به کمک جراحی (repair, suture)	herniorrhaphy (هرنیورافی)	ترمیم جراحی یک فتق
-stomy	ایجاد منفذ به کمک جراحی	tracheostomy (تراکئوستومی)	ایجاد یک منفذ در نای
-tome	ابزاری جهت ایجاد برش	microtome (میکروتوم)	ابزاری برای بریدن مقاطع باریک یک بافت برای مطالعه میکروسکوپیک
-tomy	برش، بریدن (incision)	laparotomy (لاپاروتومی)	ایجاد برش در شکم
-tripsy	خرد کردن، له کردن	lithotripsy (لیتوتریپسی)	خرد کردن سنگ کلیه

خب حالا با استفاده از مثانه (cyst/o) کلمات زیر رو بساز ببینم.

1. Incision into bladder
2. Surgical fixation of the bladder
3. Plastic repair of the bladder
4. Surgical repair of the bladder
5. Creation of an opening into bladder

Answer: 1. Cystotomy / 2. Cystopexy / 3. Cystoplasty / 4. Cystorrhaphy / 5. Cystostomy

این مبحث هم باز خیلی تست خیز هست و تو مباحث مختلف باهاش مواجه میشی. برای همین اینجا فقطِ به تستای خوب جدید بسنده میکنیم.

1. Which term is used to refer to aspiration of fluid from the joint by needle puncture?

رفرم قطب کرمان – شهریور ۹۸

A) arthrodesis
B) arthroscopy
C) rhumatoid arthritis
D) arthrocentesis

2. The patient was strongly advised to go under nephrolithotomy or .... by surgical procedure.

کلاسیک قطب مشهد = شهریور ۹۸

A) hardening of a stone in the kidney
B) removal of the urinary bladder
C) excision of the kidney and stones
D) incision to remove a renal calculus

3. Which of the following is a surgical procedure in which a pendulous breast is lifted and fixed to the chest wall?

قطب شیراز – اسفند ۹۷

A) Mastostomy
B) Mastotomy
C) Mastectomy
D) Mastopexy

4. The medical team recommended .... as the best treatment for the patient to remove the gallbladder surgically.

رفرم میاندوره کشوری – آذر ۹۸

A) cholecystotomy
B) cholecystectomy
C) cystotomy
D) cystectomy

9. Listening to body sounds with a stethoscope is .... قطب زنجان - اسفند ۹۴

A) Palpation
B) Auscultation
C) Percussion
D) Inspection

5. Surgical attachment of the urinary bladder to the abdominal wall or to other supporting structures is referred to as .... پزشکی سازدوره کشوری - شهریور ۹۴

A) tracheotomy
B) pachydactyly
C) arthrodesis
D) cystopexy

8. "Cystorrhaphy" is the surgical .... Of urinary bladder. قطب شمال - اسفند ۹۷

A) crushing
B) repair
C) incision
D) removal

7. Before an endoscopy, the patient's ....con-sent should be obtained. قطب اهواز - شهریور ۹۵

A) informative
B) informational
C) informing
D) informed

10. The term prophylaxis means: سازدوره پزشکی - اردیبهشت ۹۶

A) prevention of disease
B) generation of cell
C) poisonous quality
D) allergic reaction

4. A 45- year- old female with knee pain and swelling was reffered to a rheumatologist.The specialist performed her a (an) .... in his office. قطب مشهد - شهریور ۹۶

A) arthrodesis
B) arthroplasty
C) arthrocentesis
D) arthroclasia

12. The kind of treatment which is only intended to relieve symptoms is .... treatment قطب زنجان - اسفند ۹۴

A) Palliative
B) Curative
C) Obstructive
D) Invasive

11. This is a part of physical examination in which touching body surfaces with hand lets you discover physical abnormalities. قطب شمال - شهریور ۹۵

A) Palpation
B) Inspection
C) Auscultation
D) Percussion

Answers: 1. D / 2. D / 3. D / 4. B / 5. D / 6. B / 7. D / 8. B / 9. C / 10. A / 11. A 12. A

اینم یه متن از « **پزشکی اسفند ۹۶ – قطب اهواز**» که راجع به پزشکی جایگزین و مرتبط با درسه.

Alternative Medicine

Once people wore[1] garlic around their necks to ward off[2] disease. Today, most people would scoff at the idea of wearing a necklace of garlic cloves[3] to enhance their well- being. However, there are individuals willing to ingest[4] capsules of herbal supplements in the name of health.

Complementary and alternative medicine, which includes a range of practices outside of conventional medicine such as herbs, homeopathy, massage therapy, yoga, and acupuncture[5], hold increasing appeal[6]. In fact, according to one estimate, 42% of people over the world have used alternative therapies. In all age groups, the use of unconventional healthcare practices has steadily increased and the trend[7] is likely to continue.

۱- پوشیدن
۲- دفع کردن
۳- حبه
۴- خوردن
۵- طب سوزنی
۶- درخواست
۷- باب روز، مد، گرایش

Why have so many patients turned to alternative therapies? Many are frustrated[8] by the time constraints[9] of managed care and alienated[10] by conventional medicine's focus on technology. Others seek therapies that relieve symptoms associated with chronic disease; symptoms that mainstream[11] medicine cannot treat. Some alternative therapies have even crossed the line into mainstream medicine, as scientific investigation has confirmed[12] their safety and efficacy. For example, physicians may currently recommend acupuncture for pain management or to control the nausea associated with chemotherapy. Additionally, many medical schools teach courses in alternative therapies, and some health insurance[13] companies offer some alternative medicine benefits.

۸- خسته شدن
۹- محدودیت
۱۰- انتقال دادن
۱۱- راه اصلی
۱۲- تایید کردن
۱۳- بیمه

1. What is the main idea of this passage?

A) Alternative medicine is now a big business with more people seeking it out than ever before.
B) Today, it is not unusual for mainstream doctors to incorporate alternative therapies into their practice.
C) Over the last few decades, alternative medicine has become more popular, accepted and practiced around the universe.
D) People are tired of conventional medicine's focus on technology.

2. According to the passage, which practice would not be defined as alternative medicine?

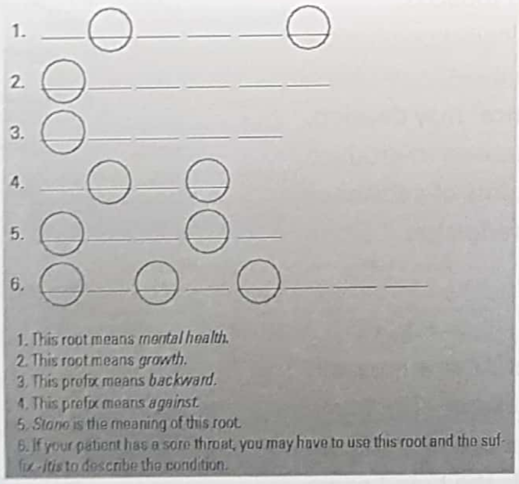
A) pain management
B) acupuncture
C) taking herbal garlic supplements
D) massage therapy

3. The passage indicates that alternative treatments are increasingly being used by mainstream medical professionals because....

A) more and more people are demanding alternative therapies.
B) healthcare insurance companies are now providing some benefits for alternative medical treatments.
C) they are frustrated by the time constraints of managed care.
D) scientific studies are becoming available that prove their effectiveness and safety

Answers: 1. C / 2. A / 3. D

ناراحت شدی فصل قبل بازی نداشت؟ بیا خب اینم یه بازی. باید کلمات رو بنویسی، حروف داخل دایره‌ها رو کنار هم بذاری و به جواب سوال برسی!!





(مثل اینکه دماغتو زدی به جایی. می‌دونی به نظرم چی نیاز داری؟)

پاسخ:

1. Psycho; 2. Trophy; 3. Retro; 4. Anti; 5. Litho; 6. Pharyngo

Answer to puzzle—Rhinoplasty

فصل ۶ داروها

Unit 6 Drugs

این درس خیلی درس کوچیکیه ولی چون ازش تست اومده بوده آوردمش. سریع بخونش.

DRUGS

A **drug** is a substance that alters[1] body function. Traditionally, drugs have been derived[2] from natural plant, animal, and mineral sources. Today, most are manufactured synthetically[3] by pharmaceutical companies. A few, such as certain hormones and enzymes, have been produced by genetic engineering[4].
Many drugs, described as over-the-counter[5] (OTC) drugs, are available without a signed[6] order, or **prescription[7] (Rx)**. Others require a healthcare provider's prescription for use. Responsibility[8] for the safety and **efficacy[9]** (effectiveness) of all drugs sold in the United States lies with the Federal Food and Drug Administration (FDA), which must approve[10] all drugs before they are sold[11].

۱- تغییر دادن / ۲- مشتق شدن
۳- صناعی / ۴- مهندسی ژنتیک
۵- بدون نسخه / ۶- امضا شده
۷- نسخه / ۸- مسئولیت
۹- اثر بخشی / ۱۰- تایید کردن
۱۱- فروختن

• Adverse[1] Drug Effects

An unintended[2] effect of a drug or any other form of treatment is a **side effect[3]**. Most drugs have potential adverse side effects that must be evaluated[4] before they are prescribed. In addition, there may be **contraindications[5]**, or reasons not to use a particular drug for a specific individual based on the person's medical conditions, current medications, sensitivity[6], or family history. While a patient is under treatment, it is important to be alert[7] for signs of adverse effects such as digestive upset, changes in the blood, or signs of allergy, such as hives[8] or skin rashes. **Anaphylaxis** is an immediate[9] and severe[10] allergic reaction that may be caused by a drug. It can lead to life-threatening[11] respiratory distress and circulatory collapse[12].

۱- بد، مضر / ۲-ناخواسته
۳- اثر جانبی / ۴- ارزیابی کردن
۵- منع مصرف / ۶- حساسیت
۷- آگاه بودن / ۸- کهیر / ۹- فوری
۱۰- شدید / ۱۱- تحدید کننده حیات
۱۲- سقوط

Because drugs given in combination may interact[1], the prescriber must know of any drugs the patient is taking before prescribing another. In some cases, a combination may result in **synergy[2]** or **potentiation**, meaning that the drugs together have a greater effect than either of the drugs acting alone. In other cases, one drug may act as an **antagonist[3]** of another, interfering with its action. Drugs may also react[4] adversely with certain foods or substances used socially[5], such as alcohol and tobacco.
Drugs that act on the central nervous system may lead to psychological or physical **substance dependence[6]**, in which a person has a chronic or compulsive[7] need for a drug regardless[8] of its bad effects. With repeated use, a drug **tolerance[9]** may develop, whereby a constant dose has less effect, and the dose must be increased to produce the original response. Cessation[10] of the drug then leads to symptoms of substance **withdrawal[11]**, a state[12] that results from a drug's removal or dose reduction. Certain symptoms are associated with withdrawal from specific drugs.

۱- تداخل داشتن
۲- تشدید اثر، هم‌افزایی
۳- مخالف
۴- واکنش دادن
۵- تفریحی / ۶- وابستگی
۷- اجباری
۸- صرف نظر از
۹- تحمل
۱۰- قطع
۱۱- ترک مواد
۱۲- وضعیت

• Drug Names

Drugs may be cited[1] by either their generic or **brand names**. The **generic name** is usually a simple version of the chemical name for the drug and is not capitalized[2]. The brand name (trade name[3], proprietary name) is a registered trademark[4] of the manufacturer[5] and is written with an initial[6] capital letter. For example, Tylenol is the brand name for the analgesic[7] compound acetaminophen; the antidepressant Prozac is fluoxetine. A brand name is protected by a patent[8]; only the company that holds the patent can produce and sell that drug under its brand name until the patent expires. Note[9] that the same drug may be marketed by different companies under different brand names. Both Motrin and Advil, for example, are the generic anti-inflammatory agent ibuprofen.

۱- ذکر کردن
۲- با حروف بزرگ نوشتن
۳- نام تجاری
۴- برند / ۵- تولید کننده
۶- ابتدا / ۷- ضددرد، مسکن
۸- حق انحصاری، امتیاز
۹- توجه کنید

■ HERBAL MEDICINE[1]

For hundreds of years, people have used plants to treat diseases, a practice described as herbal medicine or **phytomedicine**. Many people in industrialized countries are now turning to herbal products as alternatives or complements to conventional medicines. Although plants are the source of many conventional drugs, pharmaceutical companies usually purify[2], measure[3], and often modify[4] or synthesize the active ingredients[5] in these plants rather than presenting them in their natural states.

Some issues have arisen[6] with the increased use of herbal medicines and nutritional supplements, including questions about their purity, safety, concentration, and efficacy. Another issue is drug interactions. Healthcare providers should ask about the use of herbal remedies when taking a patient's drug history, and patients should report any herbal medicines they take when under treatment. The FDA does not test or verify herbal medicines, and there are no requirements to report adverse effects. There are, however, restrictions[7] on the health claims that can be made by the manufacturers of herbal medicines.

۱- داروی گیاهی
۲- خالص کردن
۳- اندازه گیری کردن
۴- تغییر دادن
۵- مواد سازنده‌ی فعال
۶- برخواستن، رخ دادن
۷- محدودیت‌ها

خب یه سری پیشوند و پسوند و ریشه کوچیک هم یاد بگیریم از داروها. اول پسوندها:

Suffix	Meaning	Example	Definition of Example
-lytic (adjective of lysis)	حل کننده، کاهنده، آزاد کننده	Thrombolytic (ترومبولیتیک)	دارویی جهت حل کردن لخته خون
-mimetic	تقلید کردن تحریک کردن	Sympathomimetic (سیمپَتومیمتیک)	تقلید اثرات سیستم عصبی سمپاتیک
-tropic	اثر گذاشتن روی	psychotropic (سایکوتروپیک)	اثر گذاری روی روان (psych/o)

حالا پیشوندها:

Prefix	Meaning	Example	Definition of Example
Anti-	ضد	Antiemetic (آنتی‌اِمتیک)	دارو جهت جلوگیری از استفراغ (استفراغ = emesis)
Contra-	ضد، مخالف	Contraceptive (کنتراسپتیو)	جلوگیری از بارداری
Counter-	ضد، مخالف	countertransport (کانترترانسپورت)	حرکت در مسیر مخالف

و همه با هم ریشه‌ها!!!!:

Root	Meaning	Example	Definition of Example
Alg/o, algi/o, algesi/o	درد	Algesia (الجزیا)	حس درد

Root	Meaning	Example	Definition of Example
Chem/o	شیمیایی	chemotherapy (کیموتراپی)	درمان با دارو
hypn/o	خواب	hypnosis (هیپنوزیس)	القای وضعیت خواب
narc/o	گیجی، نزدیک به بی‌هوشی (stupor)	narcotic (نارکوتیک)	دارو جهت القای وضعیت نزدیک به بی‌هوشی با کاهش حس
pharm pharmc/o	دارو	pharmacy (فارمِسی)	علم آماده سازی و توزیع دارو یا مکانی که این فعالیت‌ها رخ می‌دهد (داروخانه)
pyr/o pyret/o	تب	antipyretic (آنتی‌پایرتیک)	مقابله با تب
tox/o toxic/o	سم، توکسین	toxicity (تاکسیسیتی)	وضعیت سمیت
vas/o	رگ	vasodilation (ویزودایلیشِن)	متسع شدن رگ

یه به هم وصل کنید هم برو ببینم که بریم سراغ تستاش.

__ 1. chronotropic
__ 2. vasomotor
__ 3. anaphylaxis
__ 4. efficacy
__ 5. narcolepsy

A. affecting timing
B. extreme allergic reaction
C. effectiveness
D. pertaining to vessel movement
E. Brief, uncontrollable attacks of sleep during theday

Answer: 1. A / 2. D / 3. B / 4. C / 5. E

تست این مبحث خیلی زیاده ولی ما فقط چندتاشو میذاریم اینجا بقیشم تو بقیه درسا یاد میگیری.

1. Some doctor's handwriting is so bad that their patients have difficulty reading their .... (پزشکی کشوری - شهریور ۹۹)

A) jurisdictions
B) prescriptions
C) commitments
D) achievements

2. Tests must be carried out to .... the therapeutic efficacy of a drug. (پزشکی شهریور ۹۷- قطب شمال) (قطب شمال - شهریور ۹۷)

A) Convey
B) Postpone
C) Constrict
D) Confirm

3. 181-Addiction is a compulsive, uncontrollable dependence on a substance, habit or practice to such a degree that .... causes severe emotional, mental or physiologic reactions. (میان‌دوره کشوری - آذر ۹۷)

A) persistence
B) reinstatement
C) transmission
D) cessation

4. Taking which drugs may cause hypersomnia consequently endangering patient safety while operating heavy machinery? (قطب کرمان - شهریور ۹۸)

A) antitussives
B) laxatives
C) hypnotics
D) mucolytics

5. He usually shows .... reactions in the form of seizures due to his allergy to peppe.

A) prophylactic
B) prospective
C) analytic
D) anaphylactic

کارشناسی ارشد - شهریور ۹۳

6. Antiemetics are agents that prevent or arrest...........

A) Coughing
B) Belching
C) Sneezing
D) Vomiting

قطب تبریز - شهریور ۹۳

7. Use of artificial methods to prevent fertilization is termed:

A) Antiception
B) Interruption
C) Coltus
D) Contraception

قطب همدان - اسفند ۹۸

8. An antipyretic is used to?

A) Prevent a cold
B) Aid in digestion
C) Treat an infection
D) Treat a fever

ریفرم قطب زنجان - شهریور ۹۸

Answers: 1. B / 2. D / 3. D / 4. C / 5. D / 6. D / 7. D / 8. D

اینم یه متن از « پزشکی خرداد ۹۸ - میان‌دوره کشوری » که راجع به داروهای گیاهی.

A growing[1] number of Americans are using herbal products for preventive[2] and therapeutic purposes[3]. The manufacturers of these products are not required to submit proof of safety and efficacy to the U.S Food and Drug Administration before marketing. For this reason, the adverse effects and drug interactions associated with herbal remedies are largely unknown. Ginkgo Biloba extract, advertised as improving cognitive[4] functioning, has been reported to cause spontaneous[5] bleeding[6], and it may interact with anticoagulants[7] and anti-platelet agents. St. John's wort[8] (fermented[9] barely liquid[10]), promoted as a treatment for depression[11], may have monoamine oxidize- inhibiting effects or may cause increased levels of serotonin, dopamine and nor-epinephrine. Although St. John's wort probably does not interact with foods that contain tyramine, it should not be used with prescription antidepressants. Ephedrine-containing herbal products have been associated with adverse cardiovascular events, seizures[12] and even death.

۱- رو به افزایش
۲- پیشگیرانه
۳- اهداف درمانی / ۴- شناختی
۵- خود به خودی / ۶- خونریزی
۷- ضدانعقادی / ۸- علف چای
۹- تخمیر شده / ۱۰- نسبتا مایع
۱۱- افسردگی
۱۲- تشنج

1. The utilization of herbal medicine in America is...............

A) limited to the past
B) on the rise
C) alarming
D) illegal

2. The safety regulations for herbal medicine are .... those of chemical Medicines

A) identical to
B) less complicated than
C) rooted in
D) largely implemented by

3. Herbal medicine .... adverse effects

A) remains undetected for possible
B) presents a detailed account for possible
C) has greater concern for detecting
D) is largely similar to chemical medicine in

4. Out-of-control bleeding is associated with.................

A) St. John's wort
B) Ginko Biloba extract
C) manufacturers' products
D) Epherdrine-containing herbal products

5. Prescription anti-depressants------- the promoted version of St. John's wort

A) should not be separated from
B) are derived from
C) have applications similar to
D) should not be taken with

Answers: 1. B / 2. B / 3. A / 4. B / 5. D

نگاه کن دو صفحه و نیم درس خونده دنبال بازی هم میگرده!!!! برو فصل بعد ببینممم

فصل ۷ دستگاه قلبی عروقی و دستگاه لنفاوی

Unit 7 Cardiovascular & Lymphatic System

تو این قسمت میخوایم دستگاه قلب و عروق و دستگاه لنفاوی رو از نظر ساختار و عملکرد و از نظر بالینی بررسی کنیم. متن زیر رو بخون و اگر کلمه‌ای رو نمیدونستی معنیش چی میشه از ستون سمت راست استفاده کن. یه نکته اینجا بگم که قرار نیست خط به خط ترجمه کنیا!!!! باید فقط متن و لغات و معنیشون رو بفهمی و باهاشون آشنا بشی. مخصوصا اصطلاحات بولد و پررنگ شده رو خوب بخون. طراح‌ها بخوان سوال زبان اختصاصی واژگان طرح کنن از همین مباحث سوال طرح میکنن.

◈ **بررسی دستگاه قلب و عروق و دستگاه لنفاوی از نظر ساختاری و عملکردی:**

■ INTRODUCTION

Blood circulates[1] throughout the body in the cardiovascular system, which consists of the heart and the blood vessels. This system forms a continuous[2] circuit[3] that delivers oxygen and nutrients[4] to all cells and carries away waste[5] products. The lymphatic system also functions in circulation. Its vessels drain[6] fluid and proteins left in the tissues and return them to the bloodstream[7]. The lymphatic system plays a part in immunity and in the digestive[8].

۱- در گردش بودن / ۲- پیوسته
۳- مدار، گردش خون / ۴- مواد مغذی
۵- مواد زائد / ۶- تخلیه کردن
۷- جریان خون / ۸- گوارش

■ THE HEART

The heart is located[1] between the lungs, with its point, or apex[2], directed toward the inferior and left. The wall of the heart consists[3] of three layers, all named with the root *cardi*, meaning "heart." Moving from the innermost[4] to the outermost layer, these are the:

1. **Endocardium**—a thin membrane that lines the chambers[5] and valves (the prefix *endo-* means "within").
2. **Myocardium**—a thick muscle layer that makes up most of the heart wall (the root *my/o* means "muscle").
3. **Epicardium**—a thin membrane that covers the heart (the prefix *epi-* means "on").

A fibrous sac, the pericardium, contains the heart and anchors[6] it to surrounding structures, such as the sternum and diaphragm (the prefix *peri-* means "around"). Each of the heart's upper receiving chambers is an atrium[7] (plural: atria). Each of the lower pumping chambers is a ventricle[8] (plural: ventricles). The chambers of the heart are divided by walls, each of which is called a septum[9]. The interventricular septum separates the two ventricles; the interatrial septum divides the two atria. There is also a septum between the atrium and ventricle on each side.

The heart pumps[10] blood through two circuits. The right side pumps blood to the lungs to be oxygenated through the pulmonary circuit. The left side pumps to the remainder of the body through the systemic[11] circuit.

۱- در موقعیتی قرار داشتن
۲- نوک و رأس
۳- شامل بودن
۴- درونی‌ترین
۵- اتاقک‌ها
۶- متصل کردن و مستقر کردن
۷- دهلیز
۸- بطن
۹- دیواره
۱۰- پمپ کردن
۱۱- عمومی (یا همون سیستمیک)

One-way[1] valves in the heart keep blood moving in a forward direction. The valves between the atrium and ventricle on each side are the **atrioventricular** (AV) valves. The valve between the right atrium and ventricle is the **right AV** valve, also known as the **tricuspid valve** because it has three cusps (flaps[2]). The valve between the left atrium and ventricle is the left AV valve, which is a bicuspid valve with two cusps; it is often called the **mitral valve.**

۱- یک طرفه
۲- دریچه، لت، چین

The valves leading into the pulmonary artery and the aorta have three cusps. Each cusp is shaped[3] like a half-moon, so these valves are described as *semilunar*[4] valves (*lunar* refers[5] to the moon). The valve at the entrance[6] to the pulmonary artery is specifically[7] named the **pulmonary valve**; the valve at the entrance to the aorta is the **aortic valve.**

۳- شبیه بودن به
۴- هلالی (نیمه‌ماه)
۵- اشاره داشتن به
۶- ورودی / ۷- مخصوصا، اختصاصا

Heart sounds are produced[1] as the heart functions. The loudest of these, the familiar "lub" and "dup" that can be heard through the chest wall, are produced by alternate[2] closings[3] of the valves. The first heart sound (S1) is heard when the valves between the chambers close. The second heart sound (S2) is produced when the valves leading into the aorta and pulmonary artery close. Any sound made as the heart functions normally is termed a **functional**[4] **murmur**. (The word *murmur* used alone with regard[5] to the heart describes an abnormal sound.)

۱- تولید شدن
۲- تکرار مرتب، متناوب
۳- بسته شدن
۴- عملکردی
۵- مربوط به، در رابطه با

• The Heartbeat

Each contraction[1] of the heart, termed **systole** (سیستول), is followed by a relaxation[2] phase, **diastole** (دیاستول), during which the chambers fill[3]. Each time the heart beats[4], both atria contract, and immediately[5] thereafter both ventricles contract. The number of times the heart contracts per minute is the **heart rate**. The wave[6] of increased[7] pressure[8] produced in the vessels each time the ventricles contract is the **pulse**[9]. Pulse rate is usually counted by palpating[10] a peripheral[11] artery, such as the radial artery at the wrist or the carotid artery in the neck.

۱- انقباض / ۲- استراحت
۳- پر شدن یا پر کردن / ۴- ضربان
۵- بلافاصله / ۶- موج / ۷- افزایش
۸- فشار (فشار خون) / ۹- نبض
۱۰- لمس کردن / ۱۱- محیطی

Cardiac contractions are stimulated[1] by a built-in[2] system that regularly[3] transmits[4] electrical impulses[5] through the heart. In the sequence[6] of action, the components[7] of this conduction[8] system include the:

1. **Sinoatrial (SA) node**, located in the upper right atrium and called the pacemaker[9] because it sets the rate of the heartbeat.
2. **Atrioventricular (AV) node**, located at the bottom of the right atrium near the ventricle. Internodal fibers between the SA and AV nodes carry stimulation throughout both atria.
3. **AV bundle (bundle of His)** at the top of the interventricular septum.
4. **Left and right bundle branches**, which travel along the left and right sides of the septum.
5. **Purkinje** (پورکینژ) fibers, which carry stimulation throughout[10] the walls of the ventricles.

Although the heart itself generates[11] the heartbeat, factors such as nervous system stimulation, hormones, and drugs can influence the rate and the force[12] of contractions.

۱- تحریک شدن، برانگیختن
۲- داخلی
۳- به طور منظم
۴- منتقل کردن
۵- تکانه‌های الکتریکی
۶- توالی
۷- اجزاء
۸- هدایت
۹- ضربان‌ساز
۱۰- سرتاسر
۱۱- تولید کردن
۱۲- نیرو

• Electrocardiography

Electrocardiography (ECG) measures[1] the heart's electrical activity[2] as it functions. Electrodes (leads) placed on the body's surface[3] detect[4] the electrical signals, which are then amplified[5] and recorded as a tracing[6].

۱- اندازه گرفتن / ۲- فعالیت الکتریکی
۳- سطح / ۴- شناسایی کردن
۵- تقویت شده / ۶- ترسیم، ردیابی

THE VASCULAR SYSTEM

The vascular system consists of:

1. **Arteries** that carry blood away from the heart
2. **Arterioles**, vessels smaller than arteries that lead into the capillaries
3. **Capillaries**, the smallest vessels, through which exchanges[1] take place between the blood and the tissues
4. **Venules**, small vessels that receive blood from the capillaries and drain into the veins
5. **Veins** that carry blood back to the heart

All arteries, except the pulmonary artery (and the umbilical[2] artery in the fetus[3]), carry highly oxygenated blood. They are thick-walled[4], elastic vessels that carry blood under high pressure. All veins, except the pulmonary vein (and the umbilical vein in the fetus), carry blood low in oxygen. Veins have thinner, less elastic walls and tend[5] to give way under pressure. Like the heart, veins have one-way valves that keep blood flowing[6] forward. Veins are classified[7] as superficial[8] or deep[9]. The deep veins usually parallel[10] arteries and carry the same names.

Nervous system stimulation can cause the diameter[11] of a vessel to increase (vasodilation[12]) or decrease (vasoconstriction[13]). These changes alter[14] blood flow to the tissues and affect[15] blood pressure.

۱- تبادلات
۲- نافی
۳- جنین
۴- با دیواره ضخیم
۵- تمایل داشتن به
۶- در جریان بودن
۷- طبقه بندی شدن
۸- سطحی
۹- عمقی
۱۰- موازی
۱۱- قطر
۱۲- اتساع رگ
۱۳- تنگ شدن رگ
۱۴- تغییر دادن
۱۵- اثر گذاشتن

• Blood Pressure

Blood pressure (BP) is the force exerted[1] by blood against the wall of a blood vessel. It falls as the blood travels away from the heart and is influenced[2] by a variety[3] of factors, including cardiac output[4], vessel diameters, and total blood volume. Vasoconstriction increases BP in a vessel; vasodilation decreases pressure.

BP is commonly measured in a large artery with an inflatable[5] cuff technically called a **sphygmomanometer**. The examiner inflates the cuff to stop blood flow in a vessel. He or she then uses a stethoscope to listen for blood flow in the vessel as the pressure is slowly released. The BP reading includes both systolic pressure, measured while the heart is contracting, and diastolic pressure, measured when the heart relaxes. These are reported as systolic then diastolic separated[6] by a slash, such as 120/80. Pressure is expressed[7] as millimeters of mercury[8] (mm Hg), that is, the height[9] to which the pressure can push a column of mercury in a tube. BP is a valuable[10] diagnostic[11] measurement that is easily obtained[12].

۱- اعمال شده
۲- تحت تاثیر بودن از
۳- متنوع
۴- خروجی، برون‌ده
۵- دارای قابلیت باد کردن
۶- جدا شدن توسط
۷- بیان کردن
۸- جیوه / ۹- ارتفاع
۱۰- ارزشمند
۱۱- تشخیصی
۱۲- به دست آوردن

THE LYMPHATIC SYSTEM

The **lymphatic system** is a widely[1] distributed[2] system with multiple functions. Its role[3] in circulation is to return excess[4] fluid and proteins from the tissues to the bloodstream. Blind-ended[5] lymphatic capillaries pick up these materials in the tissues and carry them into larger vessels. The fluid carried in the lymphatic system is called **lymph**. Lymph drains from the lower part of the body and the upper left side into the **thoracic duct** (left lymphatic duct), which travels upward[6] through the chest and empties[7] into the left subclavian vein near the heart. The **right lymphatic duct** drains the body's upper right side and empties into the right subclavian vein.

۱- گسترده
۲- توزیع شده
۳- نقش
۴- اضافی
۵- بن‌بست
۶- به سمت بالا
۷- تخلیه شدن

Another major function of the lymphatic system is to protect the body from impurities[1] and invading[2] microorganisms. Along[3] the path of the lymphatic vessels are small masses[4] of lymphoid tissue, the **lymph nodes.** Their function is to filter the lymph as it passes through. They are concentrated[5] in the cervical (neck), axillary (armpit[6]), mediastinal (chest), and inguinal (groin[7]) regions. Other protective organs and tissues of the lymphatic system include the following:

- **Tonsils**[8], located in the throat (pharynx[9]). They filter inhaled[10] or swallowed[11] materials and aid in immunity early in life.
- **Thymus**, in the chest, above the heart. It processes[12] and stimulates lymphocytes active in immunity.
- **Spleen**, in the upper left region of the abdomen. It filters blood and destroys[13] old red blood cells.
- **Appendix**, attached[14] to the large intestine. It may aid in the development[15] of immunity.
- **Peyer patches**, in the lining[16] of the intestine. They help protect against invading microorganisms.

A final function of the lymphatic system is to absorb[17] digested fats from the small intestine. These fats are then added to the blood with the lymph that drains from the thoracic duct.

۱- ناخالصی‌ها
۲- مهاجم
۳- در طی
۴- توده‌ها
۵- تغلیظ شدن
۶- زیربغل
۷- کشاله ران
۸- لوزه
۹- حلق
۱۰- استنشاق شده
۱۱- بلعیده شده / ۱۲- پردازش کردن
۱۳- نابود کردن
۱۴- متصل به
۱۵- تکوین و تشکیل
۱۶- پوشش
۱۷- جذب

خب حالا که متن درس رو خوندی، چند تا ریشه و پسوند مرتبط با همین درس یاد بگیریم. برات معنی هر بخش رو نوشتم و یه مثال با معنیش رو هم نوشتم. حتی نحوه خوندنشون رو هم واست نوشتم که دیگه حتی تلفظشون رو هم خوب یاد بگیری. اینایی که این زیر می‌بینی ریشه‌های مربوط به قلب هستن:

Root	Meaning	Example	Definition of Example
cardi/o	heart (قلب)	cardiomyopathy (کاردیومایوپاتی)	هر بیماری مربوط به عضله قلب
atri/o	atrium (دهلیز)	atriotomy (ایتریوتومی)	برش جراحی در دهلیز
ventricul/o	cavity, ventricle (بطن، حفره)	supraventricular (سورپراونتریکولار)	بالای بطن
valv/o, valvul/o	valve (دریچه)	valvulotome (والولوتوم)	ابزار برش دریچه

این یکیا ریشه‌های مربوط به عروق هستن:

Root	Meaning	Example	Definition of Example
angi/o	vessel (رگ)	angiography (آنژیوگرافی)	تصویر رادیوگرافی از رگ
vas/o, vascul/o	vessel, duct (رگ، مجرا)	vasospasm (ویزواسپاسم)	انقباض ناگهانی رگ

Root	Meaning	Example	Definition of Example
arter/o, arteri/o	artery (شریان)	endarterial (اندارتریال)	درون یک شریان
arteriol/o	arteriol (شریانچه)	arteriolar (آرتریولار)	مربوط به شریانچه
aort/o	aorta (آئورت)	aortoptosis (آئورتوپتوزیس)	جابه جایی آئورت به سمت پایین
ven/o, ven/i	vein (ورید)	venous (وینس)	مربوط به ورید
phleb/o	vein (ورید)	phlebotomy (فلبوتومی)	ایجاد برش در یک ورید جهت خروج خون

و ریشه‌های زیر هم مربوط به دستگاه لنفاوی هستن:

Root	Meaning	Example	Definition of Example
lymph/o	lymph, lymphatic system (لنف، سیستم لنفاوی)	lymphoid (لیمفوئید)	شبیه لنف یا بافت لنفاوی
lymphaden/o	lymph node (گره لنفاوی)	lymphadenitis (لیمفادنایتیس)	التهاب گره لنفاوی
lymphangi/o	lymphatic vessel (رگ لنفاوی)	lymphangiogram (لیمفانژیوگرام)	تصویر رادیوگرافی از عروق لنفاوی
splen/o	spleen (طحال)	splenalgia (اسپلناژیا)	درد در طحال
thym/o	thymus (تیموس)	athymia (آتیمیا)	فقدان تیموس
tonsil/o	tonsil (لوزه)	tonsillar (تانسیلار)	مربوط به لوزه

حالا یه سری جمله می‌نویسم و تو با همین ریشه‌ها و پسوندهایی که یادگرفتی واسشون کلمه بساز! ببینم چقدر یاد گرفتیا!!!

1. Enlargement (-megaly) of heart
2. Inflammation of the fibrous sac around the heart
3. Originating (-genic) in the heart
4. Vasodilation means dilation of a _______
5. Endarterectomy is removal of the inner lining of ___
6. Radiograph (-gram) of aorta
7. Plastic repair (-plasty) of a vessel
8. Within (intra-) a vein
9. Enlargement of spleen
10. Any disease (-pathy) of the lymph node
11. A tumor (-oma) of lymphatic tissue
12. Lymphangioma is a tumor of _______

Answer: 1. Cardiomegaly) / 2. Pericarditis / 3. Cardiogenic / 4. Vessel / 5. Artery / 6. Aortography / 7. Angioplasty / 8. Intravenous / 9. Splenomegaly / 10. Lymphadenopathy / 11. Lymphoma / 12. Lymphatic vessel

خب به صحیح (T) و غلط (F) شیک و مجلسی هم بریم ببینیم چقدر از متن رو یاد گرفتی:

__ 1. The left AV valve is the aortic valve
__ 2. The pulmonary vein carries blood to the lungs
__ 3. The brachial artery supplies blood to the leg
__ 4. Diastole is the relaxation phase of the heart cycle
__ 5. The left ventricle pumps blood into the aorta
__ 6. The systemic circuit pumps blood to the lungs
__ 7. An artery is a vessel that carries blood back to the heart
__ 8. Peyer patches are in the intestine
__ 9. Bradycardia is a lower-than-average heart rate
__ 10. Blood returning from the lungs to the heart enters the left atrium

Answer: 1. F / 2. F / 3. F / 4. T / 5. T / 6. F / 7. F / 8. T / 9. T / 10. T

الان با خودت میگی این چرت و پرتا رو که با اطلاعات عمومی هم میتونستم بزنم... اره میدونم D: هدف صرفا تقویت قدرت درک تو از جملات انگلیسی هست که بتونی داده‌ها جدید (لغات انگلیسی) رو تو ذهنت به داده‌های قبلیت (درکت از آناتومی و فیزیولوژی مثلا) متصل کنی که بهتر زبان رو یاد بگیری.

حالا خیلی حرفه‌ای آماده‌ای که سوالات جون‌دار و قشنگ علوم پایه‌های اخیر رو جواب بدی!!! (باورت میشه؟)

1. The backward flow of blood through a defective heart valve is technically termed......

قطب زنجان - اسفند ۹۷

A) Regression
B) Regurgitation
C) Rehabilitation
D) Resuscitation

(regression: عود کردن / rehabilitation: توان بخشی / Resuscitation: احیا)

2. "Phlebotomy" refers to incision of a(n) ....

قطب همدان - شهریور ۹۵

A) Vein
B) Vessel
C) Artery
D) Capillary

3. The displacement of the heart to the left is known as ....

پزشکی میان‌دوره - شهریور ۹۹

A) dextrocardia
B) bradycardia
C) tachycardia
D) sinistrocardia

4. "Epicardium" means ....

قطب اصفهان - اسفند ۹۳

A) The thin outmost layer of the heart wall
B) The fibrous sac that surrounds the heart
C) The relaxation phase of the heartbeat cycle
D) The valve at the entrance to the pulmonary artery

5. Cardiomyoliposis is.................

قطب شیراز و همدان - اسفند ۹۶

A) fatty degeneration of the heart muscles
B) downward displacement of the heart
C) restrained movement of the heart due to fat
D) fibrous induration of the heart muscle

(Restrain: مهار شدن)

6. "A record or tracing of the electrical impulses of the heart" means:

قطب شمال - شهریور ۹۵

A) Electrocardiograph
B) Electrocardiography
C) Electrocardiogram
D) Electrocardiopathy

Answers: 1. B / 2. A / 3. D / 4. B / 5. A / 6. C

◈ بررسی دستگاه قلب و عروق و دستگاه لنفاوی از نظر بالینی:

• Atherosclerosis

The accumulation[1] of fatty deposits[2] within the lining of an artery is termed **atherosclerosis**[3] (آترواسکلروزیس). This type of deposit, called **plaque** (پلاک), begins to form when a vessel receives tiny[4] injuries, usually at a point of branching[5]. Plaques gradually[6] thicken and harden with fibrous material, cells, and other deposits, restricting[7] the vessel's lumen (opening) and reducing blood flow to the tissues, a condition known as **ischemia** (ایسکمیا). A major risk factor for the development of atherosclerosis is **dyslipidemia**, abnormally high levels or imbalance in **lipoproteins** that are carried in the blood, especially high levels of cholesterol-containing, low-density lipoproteins (LDLs). Other risk factors for atherosclerosis include smoking, high blood pressure, poor diet, inactivity, stress, and a family history of the disorder. Atherosclerosis may involve[8] any arteries, but most of its effects are seen in the coronary vessels of the heart, the aorta, the carotid arteries in the neck, and vessels in the brain. Atherosclerosis is the most common form of a more general[9] condition known as **arteriosclerosis** (آرتریواسکلروزیس) in which vessel walls harden from any cause. In addition to plaque, calcium salts and scar tissue may contribute[10] to arterial wall thickening, with a narrowing[11] of the lumen and loss of elasticity.

۱- تجمع
۲- رسوبات، ذخایر
۳- تصلب شرائن
۴- کوچک و ریز
۵- انشعاب
۶- تدریجا
۷- محدود کردن
۸- درگیر کردن
۹- کلی‌تر
۱۰- مشارکت کردن
۱۱- تنگی

• Thrombosis and Embolism

Atherosclerosis predisposes[1] a person to **thrombosis**, the formation of a blood clot within a vessel. The clot, called a **thrombus**, interrupts[2] blood flow to the tissues supplied[3] by that vessel, resulting in necrosis (tissue death). Blockage[4] of a vessel by a thrombus or other mass carried in the bloodstream is **embolism**, and the mass itself is called an **embolus**. Usually, the mass is a blood clot that breaks loose[5] from a vessel's wall, but it may also be air (as from injection or trauma), fat (as from marrow released after a bone break), bacteria, or other solid materials. Often a venous thrombus will travel through the heart and then lodge[6] in an artery of the lungs, resulting in a life-threatening[7] pulmonary embolism. An embolus from a carotid artery often blocks a cerebral vessel, causing a **cerebrovascular accident (CVA)**, commonly called **stroke**.

۱- مستعد کردن
۲- مختل کردن، قطع کردن
۳- عرضه، تأمین
۴- انسداد
۵- آزاد شدن
۶- مستقر شدن
۷- تهدید کننده حیات

• Aneurysm

An arterial wall weakened by atherosclerosis, malformation, injury, or other changes may balloon out[1], forming an **aneurysm**. If an aneurysm ruptures[2], hemorrhage results. Rupture of a cerebral artery is another cause of stroke. The abdominal aorta and carotid arteries are also common aneurysm sites. In a **dissecting aneurysm**, blood hemorrhages into the arterial wall's thick middle layer, separating the muscle as it spreads and sometimes rupturing the vessel.

۱- بیرون زدن
۲- پاره شدن

• Hypertension

High blood pressure, or **hypertension** (HTN) in simple terms, is defined as a systolic pressure greater than 140 mm Hg or a diastolic pressure greater than 90 mm Hg. HTN causes the left ventricle to enlarge[3] (hypertrophy) as a result of increased work. Some cases of HTN are secondary to other disorders, such as kidney malfunction[4] or endocrine disturbance[5], but most of the time, the causes are unknown[6], a condition described as primary, or essential, HTN.

۳- بزرگ شدن
۴- اختلال عملکرد
۵- اختلال
۶- ناشناخته

Hypertension is generally a silent[7] condition (asymptomatic[8]). Many people won't experience[9] any symptoms. It may take years for the condition to reach levels severe enough that symptoms become obvious[10]. But even without symptoms it can damage tissues.

۷- خاموش و ساکت
۸- بی‌علامت
۹- تجربه کردن / ۱۰- آشکار

■ HEART DISEASE

• Coronary Artery Disease

Coronary artery disease (CAD) results from atherosclerosis in the vessels that supply blood to the heart muscle. It is a leading[1] cause of death in industrialized countries. An early[2] sign of CAD is the type of chest pain known as **angina pectoris**[3]. This is a feeling of constriction around the heart or pain that may radiate[4] to the left arm or shoulder, usually brought[5] on by exertion[6]. Often there is anxiety[7], **diaphoresis** (profuse[8] sweating[9]), and **dyspnea**[10] (difficulty in breathing). CAD is diagnosed by ECG, **stress tests**, **echocardiography**, and **coronary angiography**. Coronary **CT angiography** (CTA) is a noninvasive[11] procedure that can be used in the diagnosis of heart disease. It employs computed tomography scans following injection of a small amount of dye[12] into the arm. Researchers have also found that a substance called **C-reactive protein** (CRP) is associated[13] with poor cardiovascular health. This protein is produced during systemic inflammation, which may contribute[14] to atherosclerosis. CRP levels can indicate[15] cardiovascular disease and predict its outcome[16] (prognosis[17]).

۱- اصلی، پیشتاز / ۲- زودهنگام
۳- درد قفسه سینه/ ۴- انتشار یافتن
۵- ایجاد شدن / ۶- فعالیت
۷- اضطراب
۸- فراوان
۹- تعریق / ۱۰- تنگی نفس
۱۱- غیرتهاجمی / ۱۲- رنگ
۱۳- مرتبط با / ۱۴- مشارکت کردن
۱۵- نشان دادن / ۱۶- نتیجه
۱۷- پیش‌آگهی

• Myocardial Infarction

Degenerative changes in the arteries predispose a person to thrombosis and sudden coronary artery **occlusion** (obstruction[1]). The resultant[2] area of myocardial necrosis is termed an **infarct**, and the process is known as **myocardial infarction** (MI), the "heart attack[3]" that may cause sudden death. Symptoms of MI include pain over the heart (precordial pain) or upper part of the abdomen (epigastric pain) that may extend to the jaw[4] or arms, pallor[5] (paleness), diaphoresis, nausea[6], fatigue[7], anxiety, and dyspnea. There may be a burning[8] sensation[9] similar to indigestion[10] or heartburn[11]. In women, because degenerative changes more commonly affect multiple small vessels rather than the major coronary pathways, MI symptoms are often more long-term and are more subtle[12] and diffuse than the intense chest pain that is more typical in men.

MI is diagnosed by ECG and assays for specific substances in the blood. Creatine kinase (CK) is an enzyme normal to muscle cells. It is released in increased amounts when muscle tissue is injured. The form of CK specific to cardiac muscle cells is **creatine kinase MB** (CK-MB). **Troponin** (Tn) is a protein that regulates[13] contraction in muscle cells.

۱- انسداد / ۲- حاصل، نتیجه
۳- حمله قلبی
۴- فک
۵- رنگ پریدگی / ۶- تهوع
۷- خستگی / ۸- سوزشی، سوزان
۹- احساس
۱۰- سوء هاضمه
۱۱- سوزش سر دل
۱۲- نامحسوس
۱۳- تنظیم کردن

• Arrhythmia

Arrhythmia is any irregularity[1] of heart rhythm, such as an altered heart rate, extra beats, or a change in the pattern[2] of the beat. **Bradycardia** is a slower-than-average[3] rate, and **tachycardia** is a higher-than-average rate.

Damage to cardiac tissue, as by MI, may result in **heart block**, an interruption in the heart's electrical conduction system resulting in arrhythmia. Heart block is classified in order of increasing severity[4] as first-, second-, or third-degree heart block. Block in a bundle branch is designated[5] as a left or right bundle branch block (BBB).

If, for any reason, the SA node is not generating a normal heartbeat or there is heart block, an artificial pacemaker may be implanted[6] to regulate the beat. Usually, the pacemaker is inserted under the skin below the clavicle, and leads are threaded[7] through veins into one or both of the right chambers.

۱- نامنظمی
۲- الگو
۳- آهسته‌تر از نرمال (میانگین)
۴- شدت
۵- معین شدن، تخصیص یافتن
۶- کاشتن
۷- عبور کردن

Some pacemakers act only when the heart is not functioning on its own, and others adjust[8] to the need for a change in heart rate based on activity. MI is also a common cause of **fibrillation**, an extremely rapid, spontaneous[9], quivering[10] and ineffective[11] heartbeat, especially dangerous when it affects the ventricles.

۸- تنظیم شدن
۹- خود به خود / ۱۰- لرزیدن
۱۱- ناموثر

• Heart Failure

The general term **heart failure** refers to any condition in which the heart fails to empty effectively. The resulting increased pressure in the venous system leads to **edema**, justifying the description *congestive*[1] *heart failure* (CHF). Left-side failure results in pulmonary edema with breathing difficulties (dyspnea[2]); right-side failure causes peripheral edema with tissue swelling[3], especially in the legs, along with weight gain from fluid retention[4]. Other symptoms of CHF are **cyanosis** and **syncope** (fainting[5]). Heart failure is treated with rest, drugs to strengthen[6] heart contractions, diuretics to eliminate fluid, and restriction of salt in the diet.

Heart failure[7] is one cause of **shock**, a severe disturbance in the circulatory system resulting in inadequate[8] blood delivery to the tissues. Shock is classified according to cause as:

- Cardiogenic shock, caused by heart failure
- Hypovolemic shock, caused by loss of blood volume
- Septic shock, caused by bacterial infection
- Anaphylactic shock, caused by severe allergic reaction

۱- احتقانی
۲- تنگی نفس
۳- تورم
۴- احتباس، نگه داشتن
۵- غش کردن
۶- قوی کردن
۷- نارسایی قلبی
۸- ناکافی

• Congenital Heart Disease

A congenital[1] defect[2] is any defect that is present at birth. The most common type of congenital heart defect is a **septal defect**, a hole[3] in the septum (wall) that separates the atria or the septum that separates the ventricles. An atrial septal defect often results from persistence[4] of an opening, the foramen ovale, that allows blood to bypass[5] the lungs in fetal circulation. A septal defect permits[6] blood to shunt from the left to the right side of the heart and return to the lungs instead of flowing out to the body. The heart has to work harder to meet the tissue's oxygen needs. Symptoms of septal defect include cyanosis (leading to the description "blue baby"), syncope, and **clubbing** of the fingers.

۱- مادرزادی
۲- نقص
۳- سوراخ
۴- باقی ماندن
۵- گذر کردن، عبور کردن
۶- اجازه دادن

• Rheumatic Heart Disease

In **rheumatic heart disease**, infection with a specific type of *Streptococcus* sets up an immune reaction that ultimately[1] damages the heart valves. The infection usually begins as a "strep throat", and most often the mitral valve is involved. Scar tissue fuses the valve's leaflets[2], causing a narrowing or **stenosis**[3] that interferes[4] with proper function.

People with rheumatic heart disease are subject to repeated valvular infections and may need to take antibiotics prophylactically (preventively[5]) before invasive medical or dental procedures. Severe cases of rheumatic heart disease may require surgical correction or even valve replacement. The incidence[6] of rheumatic heart disease has declined[7] with the use of antibiotics.

۱- در نهایت
۲- لت
۳- تنگی
۴- مداخله کردن
۵- جهت جلوگیری
۶- بروز
۷- کاهش یافتن

■ DISORDERS OF THE VEINS

A breakdown[1] in the valves of the veins in combination with a chronic dilatation of these vessels results in **varicose veins.** These appear twisted[2] and swollen under the skin, most commonly in the legs. Contributing factors include heredity, obesity, prolonged[3] standing, and pregnancy, which increase pressure in the pelvic veins. Varicosities can impede[4] blood flow and lead to edema, thrombosis, hemorrhage, or ulceration. A varicose vein in the rectum or anal canal is referred to as a **hemorrhoid.**

۱- تجزیه
۲- پیچ خورده
۳- طولانی
۴- مانع شدن

Phlebitis is any inflammation of the veins and may be caused by infection, injury, poor circulation, or damage to valves in the veins. Such inflammation typically initiates[1] blood clot formation, resulting in **thrombophlebitis**. Any veins are subject to[2] thrombophlebitis, but the more serious condition involves the deep veins as opposed[3] to the superficial veins, in the condition termed **deep vein thrombosis** (DVT). The most common sites for DVT are the deep leg veins, causing serious reduction in venous drainage[4] from these areas.

۱- شروع شدن
۲- مستعد بودن
۳- در مقابل
۴- تخلیه وریدی

■ DISORDERS OF THE LYMPHATIC SYSTEM

Changes in the lymphatic system are often related to infection and may consist of inflammation and enlargement of the nodes, called **lymphadenitis**, or inflammation of the vessels, called **lymphangitis**. Obstruction of lymphatic vessels because of surgical excision[1] or infection results in tissue swelling, or **lymphedema.** Any neoplastic disease involving lymph nodes is termed **lymphoma**. These neoplastic disorders affect the white blood cells found in the lymphatic system.

۱- برش جراحی

حالا که کلی لغت یاد گرفتی یه دوره کلی هم بکنیم از چیزایی که تو این درس یاد گرفتیم و بعد هم تست و سپس بازی!!

___ 1. Thrombosis	A. Inflammation of heart muscle
___ 2. Myocarditis	B. Lower, pointed region of the heart
___ 3. Regurgitation	C. Local deficiency of blood
___ 4. ischemia	D. backward flow
___ 5. Apex	E. Formation of a blood clot in a vessel
___ 6. Aortoptosis	F. Downward displacement of aorta

Answer: 1. E / 2. A / 3. D / 4. C / 5. B / 6. F

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. Spontaneous quivering and ineffectual contraction of muscle fibers, as in the atria or ventricles, is referred to as ....

رفرم قطب تبریز - شهریور ۹۸

A) tachycardia
B) infarction
C) diaphoresis
D) fibrillation

2. The prefix "brady" in the term "bradycardia" means..............

کلاسیک قطب مشهد - شهریور ۹۸

A) away from
B) downward
C) irregular
D) slow

3. Part of the problem among all population is .... nature of hypertension for the first 10 to 20 years, while it is provoking cardiac and vascular damage.

A) Diagnostic
B) Hypertensive
C) Malignant
D) Asymptomatic

(Diagnostic: تشخیصی / Hypertensive: پرفشار / Malignant: بدخیم)

ریفرم قطب زنجان - شهریور ۹۸

4. The patient claimed that her heart races and she cannot catch her breath, The terms for these conditions are, respectively ....

A) Dyspnea and tachycardia
B) Tachycardia and bradypnea
C) Tachypnea and dyspnea
D) Tachycardia and dyspnea

قطب اراک - شهریور ۹۷

5. Chest discomfort due to narrowing of the coronary arteries is called ....

A) Pleurisy
B) Pleurodynia
C) Carditis
D) Angina pectoris

قطب شمال - اسفند ۹۳

6. Extreme high air temperatures can directly .... Deaths from cardiovascular and respiratory disease, particularly among elderly people.

A) rule out
B) contribute to
C) compensate for
D) turn down

(rule out: رد کردن / compensate: جبران کردن / turn down: خرد کردن)

مشترک کشوری - شهریور ۹۶

7. Syncope is a well-recognized prognostic sign in aortic ...., which is considered as the obstruction to the outflow from the left ventricle into the aorta.

A) stenosis
B) prognosis
C) occlusion
D) stent

قطب مشهد - اسفند ۹۷

8. A(n) .... is a bulge in a weakened arterial wall that can rupture and cause damage.

A) psoriasis
B) aneurysm
C) epileptiform
D) adenoma

ریفرم قطب اهواز - شهریور ۹۸

9. The accumulation of fatty deposits, usually as a result of dyslipidemia, resulting in restricting the vessel's lumen is called ....

A) stenosis
B) atherosclerosis
C) plaque
D) arteriosclerosis

ریفرم قطب کرمان - شهریور ۹۸

10. The accumulation of fatty .... within the lining of an artery is termed atherosclerosis.

A) Deposits
B) Platelets
C) Secretions
D) Humors

قطب تهران - اسفند ۹۴

11. Development of a blood clot within a vessel is called ....

A) endartery
B) embolism
C) angiogenesis
D) thrombosis

قطب مشهد - اسفند ۹۵

12. ....is the inflammation and enlargement of a lymph node, usually as a result of infection.

A) lymphangitis
B) lymphadenitis
C) lymphedema
D) Lymphoma

قطب مشهد - شهریور ۹۵

Answers: 1. D / 2. D / 3. D / 4. B / 5. D / 6. B / 7. A / 8. B / 9. B / 10. A / 11. D / 12. B

خب خب می‌بینم که به خودت می‌بالی که این فصلو هم تموم کردی. برو متن « پزشکی ریفرم و کلاسیک شهریور ۹۸- قطب اهواز» رو که به این مبحث مربوط میشه رو بزن ببینم چند مرده حلاجی!!!

Fluid balance[1] in the body requires[2] appropriate[3] distribution of fluid among the cardiovascular system, lymphatic system, and the tissues. Edema occurs[4] when the balance is tipped toward[5] excess fluid in the tissues. Often, edema is due to heart failure. However, blockage of lymphatic vessels (with resulting fluid accumulation in the tissues) can cause another form of edema, called lymphedema. The clinical hallmark[6] of lymphedema is chronic swelling of an arm or leg, whereas heart failure usually causes swelling of both legs. Lymphedema may be either primary or secondary. Primary[7] lymphedema is a rare[8] congenital condition caused by abnormal development of lymphatic vessels. Secondary[9] lymphedema, or acquired lymphedema, can develop as a result of trauma to limb, surgery, radiation therapy, Or infection of the lymphatic vessels (lymphangitis). One of the most common causes of lymphedema is the removal of axillary lymph nodes during mastectomy, which disrupts lymph flow from the adjacent[10] arm. Lymphedema may also occur following[11] prostate surgery. Therapies[12] that encourage[13] the flow of fluid through the lymphatic vessels are useful in treating lymphedema. These therapies may include elevation[14] of the affected limb, manual[15] lymphatic drainage through massage, light[16] exercise, and firm[17] wrapping[18] of the limb to apply compression. In addition, changes in daily habits can lessen the effects of lymphedema. For example, further blockage of lymph drainage can be prevented by wearing loose clothing and jewelry, carrying a purse or handbag on the unaffected arm, and not crossing the legs when sitting. Lymphangitis requires the use of appropriate antibiotics. Prompt[19] treatment is necessary because in addition to swelling, other complications include poor wound healing, skin ulcers, and increased risk of infection.	۱- تعادل / ۲- نیاز داشتن ۳- مناسب ۴- رخ دادن ۵- تمایل به سمتی ۶- شاه علامت ۷- اولیه ۸- نادر ۹- ثانویه ۱۰- مجاور ۱۱- به دنبال ۱۲- درمان‌ها ۱۳- تقویت کردن ۱۴- بالا کردن ۱۵- دستی ۱۶- سبک ۱۷- محکم ۱۸- بستن ۱۹- سریع

1. Which phrase is more closely related to "tipped toward" underlined in the second paragraph?

A) alleviated by B) predisposed to C) withdrawn from D) preserved for

(alleviated by: رفع شدن توسط / predisposed to: مستعد شدن به)

(withdrawn from: گرفته شدن یا دور شدن از / preserved for: حفظ شدن برای)

2. The author implies that ....

A) lymphedema impacts can be minimized through some modifications in daily routines.

B) more emergent care is needed if body fluid is improperly distributed across lymphatic rather than cardiovascular system

C) antibiotics are recommended to cease the hereditary malformation of the lymphatic system.

D) surgery is the first line of treatment to reduce swelling and encourage the flow of lymph fluid.

Answers: 1. B / 2. A

فکر کردی به یه متن دو سواله بسنده میکنم؟؟ ☺.. یکی دیگه هم بزن این یکی از « **پزشکی ریفرم شهریور ۹۸- مشترک کشوری** »:

The fitness world is full of gadgets[1]. Some are helpful, but many are more trouble[2] than they are worth[3]. Regardless[4] of what shape you are in, one device you might find useful is a heart rate monitor. The key to cardiovascular fitness is getting a good but safe aerobic workout[5]. Heart rate monitors, which monitor your heart rate while you exercise, can help you do that with ease[6]. They range from relatively simple devices that show at a glance[7] how many times per minute your heart is beating, to devices that record information like how long you were exercising at your target heart rate.	۱- ابزارها ۲- مشکل زا ۳- ارزش داشتن / ۴- صرف نظر از ۵- ورزش ۶- راحتی ۷- نگاه

Here is a simple way to determine your maximum and target heart rates: subtract[8] your age from 220 to figure out your maximum heart rate. For example, if you are 35, your maximum heart rate is 185 beats per minute. Your target heart rate is 50% to 85% of that number, or 93 beats to 157 beats per minute. These numbers are based on a healthy adult.

۸- کم کردن (تفریق)

1. The text .... fitness gadgets

A) challenges the benefits of any
B) rejects any troubles caused by
C) recommends the use of any
D) approves the use of certain

2. The maximum heart rate for a person who is 50 years old is .... beats per minutes.

A) 180
B) 170
C) 157
D) 165

3. The heart rate monitor is referred to as a ....

A) helpful gadget
B) fitness exercise
C) trouble gadget
D) outdated gadget

(reject: رد کردن / outdated: منقضی شده)

4. Heart rate monitors that are used to check heart rate are ....

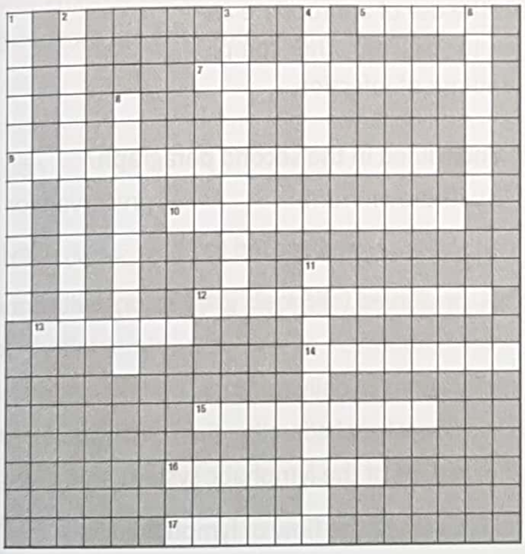
A) of various types
B) to check the heart just at a glance
C) few simple devices
D) to show the duration of exercise

5. The underlined word "that" refers to ....

A) a heart rate monitor
B) the key to cardiovascular fitness
C) fitness exercise
D) a good but safe aerobic workout

Answers: 1. D / 2. B / 3. A / 4. A / 5. D

اینم جایزه‌ی تو برای اتمام این فصل، بازی‌ای با مضمون همین فصل!

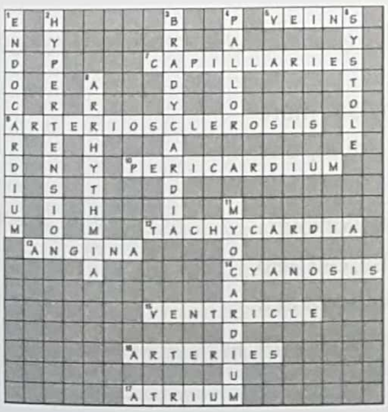


Across

5. Return blood to the heart
7. Smallest blood vessels
9. Hardening of the arteries
10. Thin sac that protects the heart
12. Rapid heartbeat
13. Chest pain
14. Blue-colored skin
15. Lower chamber of the heart
16. Carry blood away from the heart
17. Upper chamber of the heart

Down

1. Lining of the heart's chambers
2. High blood pressure
3. Slow heartbeat
4. Word for abnormal paleness
6. When the heart contracts
8. Deviation from normal rhythm
11. Heart muscle



اینم پاسخششششش

فصل ۸ خون و ایمنی

Unit 8 Blood And Immunity

تو این قسمت میخوایم باز مثل قبل خون و ایمنی رو از نظر ساختار و عملکرد و از نظر بالینی بررسی کنیم. متن زیر رو بخون و اگر کلمه ای رو نمیدونستی معنیش چی میشه از ستون سمت راست استفاده کن. دوباره یادآوری کنم که قرار نیست خط به خط ترجمه کنیا!!!. باید فقط متن و لغات و معنیشون رو بفهمی و باهاشون آشنا بشی. مخصوصا اصطلاحات بولد و پررنگ شده رو خوب بخون. طراح‌ها بخوان سوال زبان اختصاصی واژگان طرح کنن از همین مباحث سوال طرح میکنن.

◈ بررسی خون و ایمنی از نظر ساختاری و عملکردی:

■ INTRODUCTION

Blood is the fluid that circulates[1] through the vessels, bringing oxygen and nourishment[2] to all cells and carrying away carbon dioxide and other waste[3] products. The blood also distributes[4] body heat and carries special substances, such as antibodies and hormones. Certain blood cells are a major[5] component[6] of the immune system[7], which protects[8] against[9] disease.

۱- در گردش بودن / ۲- مواد مغذی
۳- مواد زائد / ۴- توزیع کردن / ۵- اصلی
۶- اجزاء / ۷- سیستم ایمنی
۸- محافظت کردن / ۹- در برابر

■ BLOOD

The total adult blood volume is about 5 L. Whole[1] blood can be divided[2] into two main components: the liquid[3] portion[4], or **plasma** (55 percent), and **formed elements**[5], more commonly known as blood cells (45 percent)

۱- تمام / ۲- تقسیم شدن
۳- مایع / ۴- بخش
۵- عناصر تشکیل شده

• Blood Plasma

Plasma is about 90 percent water. The remaining[1] 10 percent contains[2] nutrients, **electrolytes** (dissolved salts[3]), gases[4], **albumin** (a protein), clotting factors[5], antibodies, wastes, enzymes, and hormones. Laboratories test for a multitude[6] of these substances in blood chemistry tests. The pH (relative acidity[7]) of the plasma remains steady at about 7.4.

۱- باقی مانده / ۲- شامل
۳- نمک‌های حل شده / ۴- گازها
۵- فاکتورهای انعقادی / ۶- تعداد زیادی
۷- اسیدیته نسبی

• Blood Cells

The blood cells include **erythrocytes**, or red blood cells (RBCs); **leukocytes**, or white blood cells (WBCs); and **platelets**[1], also called **thrombocytes**. All blood cells are produced in red bone marrow[2]. Some WBCs multiply[3] in lymphoid tissue[4] as well.

۱- پلاکت / ۲- مغز استخوان
۳- تکثیر یافتن / ۴- بافت لنفاوی

Erythrocytes: The major function[1] of erythrocytes is to carry oxygen to cells. This oxygen is bound[2] to an iron-containing pigment[3] in the cells called **hemoglobin**. Erythrocytes are small, disk- shaped[4] cells with no nuclei[5]. Their concentration[6] of about 5 million per microliter (mcL) of blood makes them by far the most numerous[7] of the blood cells. An RBC gradually[8] wears out[9] and dies in about 120 days, so these cells must be constantly[10] replaced. Production of red cells in the bone marrow is regulated[11] by the hormone **erythropoietin** (EPO), which is made in the kidneys.

۱- عملکرد / ۲- پیوند و اتصال
۳- رنگدانه / ۴- به شکل صفحه
۵- هسته / ۶- غلظت / ۷- بی‌شمار
۸- تدریجی / ۹- فرسوده شدن
۱۰- مداوم / ۱۱- تنظیم شدن

Leukocytes: All WBCs show prominent[1] nuclei when stained[2]. They total about 5,000 to 10,000/mcL, but their number may increase[3] during infection. There are five types of leukocytes that vary[4] in their relative percentages and their functions. The different types are identified by the size and appearance[5] of the nucleus, by their staining properties[6], and by whether or not they show visible granules in the cytoplasm when stained. Classified as granulocytes or agranulocytes, they are as follows:

- **Granulocytes**, or granular leukocytes, have visible granules in the cytoplasm when stained. A granulocyte has a segmented[7] nucleus. There are three types of granulocytes, named for the kind of stain (dye[8]) the granules take up:

۱- واضح / ۲- رنگ آمیزی شدن
۳- افزایش
۴- متفاوت بودن
۵- ظاهر
۶- ویژگی‌ها
۷- قطعه قطعه
۸- رنگ

- Neutrophils stain weakly with both acidic and basic dyes.
- Eosinophils stain strongly with acidic dyes.
- Basophils stain strongly with basic dyes.

- **Agranulocytes** do not show visible granules when stained. An agranulocyte's nucleus is large and either round or curved[9]
. There are two types of agranulocytes:
  - **Lymphocytes** are the smaller agranulocytes.
  - **Monocytes** are the largest of all the WBCs.

۹- منحنی

WBCs protect against foreign substances. Some engulf[1] foreign material by the process of **phagocytosis**; others have different functions in the immune system. The most numerous WBCs, neutrophils, are called *polymorphs* because of the various shapes of their nuclei. A **band cell**, also called a *stab cell*, is an immature[2] neutrophil with a solid curved nucleus .Large numbers of band cells in the blood indicate an active[3] infection.

۱- دربرگرفتن
۲- نابالغ
۳- فعال

Platelets: The blood platelets (thrombocytes) are not complete cells, but fragments[1] of large cells named **megakaryocytes**, which form in bone marrow. They number from 200,000 to 400,000/mcL of blood. Platelets are important in **hemostasis**[2], the prevention[3] of blood loss, which includes the process of blood clotting[4], or **coagulation**[5] .
When a vessel is injured[6], platelets stick[7] together to form a plug[8] at the site. Substances released from the platelets and from damaged tissue then interact[9] with clotting factors in the plasma to produce a wound-sealing clot. Clotting factors are inactive in the blood until an injury occurs. To protect against unwanted[10] clot formation, 12 factors must interact before blood coagulates. The final reaction is the conversion[11] of **fibrinogen** to threads[12] of **fibrin** that trap[13] blood cells and plasma to produce the clot. The plasma that remains after blood coagulates is **serum**.

۱- قطعات
۲- بند آوردن خونریزی
۳- جلوگیری / ۴- لخته شدن
۵- انعقاد یا لخته شدن
۶- آسیب دیدن / ۷- چسبیدن
۸- بستن / ۹- واکنش دادن
۱۰- ناخواسته
۱۱- تبدیل شدن
۱۲- رشته‌ها
۱۳- به دام انداختن

• Blood Types

Genetically inherited[1] proteins on the surface of RBCs determine blood type. The most familiar of them are the ABO and Rh blood groups. The ABO system includes types A, B, AB, and O. The Rh types are Rh positive (Rh+) and Rh- negative (Rh-). Blood is typed[2] by mixing samples separately[3] with different prepared[4] antisera. Red cells in the sample will agglutinate (clump[5]) with the antiserum that corresponds to the blood type.
In giving blood transfusions[6], it is important to use blood that is the same type as the recipient[7]'s blood or a type to which the recipient will not have an immune reaction. In an emergency, type O, Rh-negative blood can be used because these red cells will not induce an immune response. When there is time, laboratories perform[8] more complete tests for compatibility[9] that take additional blood proteins into account. In this process of **cross-matching**, donor[10] red cells are mixed with recipient serum to test for a reaction.

۱- ارثی
۲- طبقه بندی کردن
۳- جداگانه
۴- آماده شده
۵- تجمع یافتن، آگلوتیناسیون
۶- انتقال خون
۷- گیرنده
۸- انجام دادن
۹- تطابق
۱۰- اهدا کننده

■ IMMUNITY

Immunity is protection against disease. It includes defenses[1] against harmful[2] microorganisms, their products, or any other foreign substance. These defenses may be inborn[3] or acquired[4] during life.

۱- دفاع‌ها / ۲- آسیب رسان
۳- ذاتی
۴- اکتسابی

• Innate[5] Immunity

Innate defense mechanisms protect against any invading[6] organism or harmful foreign substance, not any particular[7] one. Thus, they are described as *nonspecific*[8]. These defenses are inborn and are based[9] on an individual's inherited genetic makeup[10]. Most of these protections are physical barriers[11] or chemical defenses and include the following:

- Unbroken skin, which acts as a barrier
- Cilia[12], tiny cell projections that sweep[13] impurities[14] out of the body, as in the respiratory tract
- Mucus that traps foreign material
- Bactericidal[15] body secretions, as found in tears[16], skin, digestive[17] tract, and reproductive tract
- Reflexes, such as coughing[18] and sneezing[19], which expel[20] impurities
- Lymphoid tissue, which filters impurities from blood and lymph
- Phagocytes, cells that attack, ingest, and destroy foreign organisms

۵- ذاتی
۶- مهاجم
۷- خاص و مشخص / ۸- غیراختصاصی
۹- براساس / ۱۰- آرایش ژنتیکی
۱۱- سدها
۱۲- مژک‌ها
۱۳- جاروب کردن / ۱۴- آلودگی‌ها
۱۵- باکتری کش / ۱۶- اشک‌ها
۱۷- گوارش
۱۸- سرفه
۱۹- عطسه / ۲۰- بیرون انداختن

• Adaptive Immunity

Adaptive immunity is acquired during life and is *specific*, that is, directed[1] toward a particular disease organism or other foreign substance. Protection against measles[2], for example, will not protect against chickenpox[3] or any other disease.

The adaptive immune response involves complex interactions between components of the lymphatic system and the blood. Any foreign particle[4], but mainly proteins, may act as an antigen, a substance that provokes[5] an immune response. This response comes from two types of lymphocytes that circulate in the blood and lymphatic system:

- **T cells (T lymphocytes)** mature in the thymus. They are capable[6] of attacking a foreign cell directly, producing *cell-mediated immunity*. Immune cells known as **antigen presenting cells (APCs)**, which take in and process foreign antigens, are important to T cell function. A T cell is activated when it contacts an antigen on an APC's surface in combination with some of the body's own proteins. Examples of APCs are dendritic cells and macrophages, which are descendants[7] of monocytes.
- **B cells (B lymphocytes)** mature in bone marrow. When they meet a foreign antigen, they multiply rapidly[8] and mature into **plasma cells**. These cells produce **antibodies**, also called **immunoglobulins (Ig)**, that inactivate antigens. Antibodies remain in the blood, often providing[9] long-term[10] immunity to the specific organism against which they were formed. Antibody-based immunity is referred to as *humoral immunity*.

۱- هدایت شده
۲- سرخک
۳- آبله مرغان
۴- ذره
۵- تحریک کردن
۶- قابلیت
۷- نوادگان
۸- به سرعت
۹- فراهم کردن
۱۰- طولانی مدت

• Types of Adaptive Immunity

Adaptive immunity may be acquired either naturally[1] or artificially[2]. In addition, each avenue[3] for acquiring such immunity may be either active or passive. In active immunity, a person makes his or her own antibodies in response[4] to contact with an antigen. In passive immunity, an antibody, known as an immune serum, is transferred from an outside source. Immune sera may come from other people or from immunized animals. The portion of the blood plasma that contains antibodies is the **gamma globulin** fraction. The types of adaptive immunity are:

- Natural adaptive immunity
  - Active—from contact with a disease organism or other foreign antigen
  - Passive—by transfer of antibodies from a mother to her fetus[5] through the placenta[6] or through the mother's milk

۱- طبیعی
۲- مصنوعی
۳- مسیر، خیابان
۴- پاسخ
۵- جنین
۶- جفت

- Artificial adaptive immunity
    - Active—by administration[7] of a vaccine, which may be a killed or weakened[8] organism, part of an organism, or an altered[9] toxin (toxoid)
    - Passive—by administration of an immune serum obtained[10] from other people or animals

۷- تجویز
۸- ضعیف شده
۹- تغییر یافته
۱۰- گرفته شده

خب حالا که متن درس رو خوندی، چند تا ریشه و پسوند مرتبط با همین درس یاد بگیریم. برات معنی هر بخش رو نوشتم و یه مثال با معنیش رو هم نوشتم. حتی نحوه خوندنشون رو هم واست نوشتم که دیگه حتی تلفظشون رو هم خوب یاد بگیری.

Root or Suffix	Meaning	Example	Definition of Example
-emia, -hemia	condition of blood (وضعیتی در خون)	polycythemia (پُلی‌سایتِمیا)	افزایش تمام سلول‌ها (Cyt) در خون
-penia	decrease in/deficiency of (کاهش، کمبود)	Cytopenia (سایتوپنیا)	کاهش سلول‌ها
-poiesis	formation, production (تشکیل، تولید)	hemopoiesis (هِموپویِسیز)	تولید سلول‌های خون
myel/o	bone marrow (مغز استخوان)	myelogenous (مایِلوجنوس)	منشاء گرفته از مغز استخوان
hem/o, hemat/o	blood (خون)	hemopathy (هموپاتی)	هر اختلالی در خون
erythr/o, erythro-cyte/o	red blood cell (گلوبول قرمز)	erythroblast (اریتروبلاست)	گلوبول قرمز نابالغ
leuk/o, leukocyt/o	white blood cell (گلوبول سفید)	leukocytosis (لوکوسیتوز)	افزایش تعداد گلبول سفید در خون (سلول + osis- = افزایش تعداد)
lymph/o, lymphocyte/o	lymphocyte (لنفوسیت)	lymphatic (لیمفاتیک)	مربوط به لنفوسیت‌ها
thromb/o	blood clot (لخته خون)	thrombolytic (ترومبولیتیک)	حل کردن لخته خون
thrombocyt/o	platelet, thrombocyte (پلاکت)	thrombocytopenia (ترومبوسایتوپنی)	کاهش پلاکت‌ها
immune/o	immunity, immune system (ایمنی، سیستم ایمنی)	immunization (ایمیونیزیشن)	تولید یا ایجاد ایمنی

یه اصطلاح دیگه ای هم که داریم و تو این جدول ننوشتیم آنیزوسیتوز (Anisocytosis). حالا یعنی چی؟ بیایم بشکافیمش. Cytosis رو که دیگه میدونین یعنی زیاد شدن سلول... iso هم یعنی هم سایز و هم اندازه ... An هم برای منفی کردن میاد! پس آنیزوسیتوز میشه افزایش سلول‌هایی با سایزهای نابرابر اما!!!!!! این اصطلاح رو فقط برای سلول‌های قرمز (اریتروسیت‌ها) به کار میبرن! اینم گفتم بگم جا نمونه.

یه سری ریشه هم راجع به یون‌ها یاد بگیر:

Root	Meaning	Example	Definition of Example
azot/o	ترکیبات نیتروژن	azoturia (ازوتوریا)	افزایش ترکیبات نیتروژن در ادرار (وضعیت در ادرار = -uria)
calc/i	کلسیم	calcification (کلسیفیکیشن)	تجمع نمک‌های کلسیمی
ferr/o, ferr/i	آهن	ferrous (فروس)	مربوط به یا شامل آهن
sider/o	آهن	sideroderma (سیدِرودرما)	تجمع آهن در پوست
kali	پتاسیم	hyperkalemia (هایپرکالمیا)	افزایش پتاسیم خون
natri	سدیم	natriuresis (ناتریورزیس)	نرشح سدیم به ادرار
ox/y	اکسیژن	hypoxia (هایپوکسیا)	کمبود اکسیژن در بافت‌ها

حالا یه سری جمله می‌نویسم و تو با همین ریشه‌ها و پسوندهایی که یادگرفتی واسشون کلمه بساز! نترس مثل پازل میمونه!

1. Decrease in white blood cells
2. Immature lymphocyte
3. Formation of bone marrow
4. Increase (-osis) in granulocytes
5. Presence of erythrocytes with unequal sizes
6. Presence of pathogenic bacteria in the blood ____
7. Leukopoiesis refers to production of ______
8. Erythroclasis is the breaking (-clasis) of ______
9. Hemorrhage is a profuse flow (-rhage) of ______
10. Presence of excess WBC in blood
11. Formation of fibrous tissue (-fibrosis) and destruction of bone marrow
12. Hemorrhage in to spinal corel
13. Vomiting blood

Answer: 1. Leukopenia (leukocytopenia) / 2. Lymphoblast / 3. Myelopoiesis / 4. Granulocytosis / 5. Anisocytosis / 6. Septicemia / 7. WBC / 8. RBC / 9. Blood / 10. Leukemia / 11. Myelofibrosis / 12. Hematomyelia / 13. Hematemesis

سخت که نبود؟ قشنگ رو این مبحث مسلط شدی هرچی بهت بدن دیگه میتونی جواب بدی.

1. The state in which any of three recessive disorders of galactose metabolism causes accumulation of galactose in the blood is referred to as ....

A) galactodase
B) galacterreha
C) galactosemia
D) galactostasis

قطب زنجان - اسفند ۹۶

2. The term "Anisocytosis" refers to the ....

A) Presence of erythrocytes with unequal sizes
B) Abnormality in the cell production process
C) Abnormal enlargement of a cell
D) Inability to produce cells

قطب شیراز- شهریور ۹۵

3. Deficiency in white blood cells is called................

A) Leukemia
B) Leukocytopenia
C) Leukopoiesis
D) Leukocytosis

قطب اهواز- شهریور ۹۴

4. Which of the following terms means "a decrease in all cells of the blood"?

A) Leukopenia
B) Polycythemia
C) Pancytopenia
D) Thrombocytopenia

قطب تبریز- شهریور ۹۷

5. Myelofibrosis is a disease in which there is ....

A) Absence of bone marrow.
B) Lymphatic tissue in the bone marrow.
C) Destruction of the bone marrow.
D) dangerously high hemoglobin and hematocrit

قطب آزاد- اسفند ۹۵

6. Blood platelets are continually involved in microscope ...., seal the gaps that occur normally in capillary and venule endothelium.

A) Degeneration
B) Approximation
C) Hemostasis
D) Coagulation

(Degeneration: تخریب و نابودی / Approximation: تخمین / Hemostasis: هموستاز و جلوگیری از خونریزی)

قطب بهشتی- اسفند ۹۵

7. Process by which the human body gets rid of .... micro-organisms is called phagocytosis.

A) Invading
B) Cancerous
C) Pathogenic
D) Benign

(Invading: مهاجم / Cancerous: سرطانی / Pathogenic: آسیب‌زا / Benign: خوش‌خیم)

قطب شمال- شهریور ۹۴

8. A phagocytoblast is ....

A) A phagocyte unable to perform phagocytosis.
B) A cell which acts like a mature phagocyte.
C) An abnormal phagocyte.
D) A primitive cell developing into phagocyte.

قطب کرمان، تهران- شهریور ۹۳

9. "Sideroderma" is a condition that refers to the "..........." of "............" Into skin.

A) Deposition- sodium
B) Deficiency- iron
C) Deposition- iron
D) Deficiency- sodium

قطب همدان- اسفند ۹۵

10. Introduction of blood or blood components from one person to another is called ....

A) Transfusion
B) Infusion
C) Injection
D) Transplantation

قطب شمال - اسفند ۹۳

Answers: 1. C / 2. A / 3. B / 4. C / 5. C / 6. D / 7. A / 8. D / 9. C / 10. A

◈ بررسی خون و ایمنی از نظر بالینی:

■ ANEMIA

Anemia[1] is defined as an abnormally low amount of hemoglobin in the blood. Anemia may result from too few RBCs or from cells that are too small (microcytic[2]) or have too little hemoglobin (hypochromic[3]). Key tests in diagnosing anemia are blood counts[4], mean corpuscular volume (MCV), and mean corpuscular hemoglobin concentration (MCHC). Below box describes these and other blood tests.

۱- کم خونی
۲- سلول کوچک
۳- کم رنگ (chrom = رنگ)
۴- شمارش

Box 10-4

FOR YOUR REFERENCE
Common Blood Tests

Test	Abbreviation	Description
red blood cell count	RBC	number of red blood cells per microliter of blood
white blood cell count	WBC	number of white blood cells per microliter of blood
differential count	Diff	relative percentage of the different types of leukocytes
hematocrit (Fig. 10-10)	Ht, Hct, crit	relative percentage of packed red cells in a given volume of blood
packed cell volume	PCV	hematocrit
hemoglobin	Hb, Hgb	amount of hemoglobin in g/dL (100 mL) of blood
mean corpuscular volume	MCV	volume of an average red cell
mean corpuscular hemoglobin	MCH	average weight of hemoglobin in red cells
mean corpuscular hemoglobin concentration	MCHC	average concentration of hemoglobin in red blood cells
erythrocyte sedimentation rate	ESR	rate of erythrocyte settling per unit of time; used to detect infection or inflammation
complete blood count	CBC	series of tests including cell counts, hematocrit, hemoglobin, and cell volume measurements

The general[1] symptoms of anemia include fatigue[2], shortness of breath, heart palpitations[3], pallor[4], and irritability[5]. There are many different types of anemia, some of which are caused by faulty[6] production of red cells and others by loss or destruction of red cells.

۱- عمومی / ۲- خستگی / ۳- طپش قلب
۴- رنگ‌پریدگی / ۵- بی‌قراری
۶- معیوب

• Anemia due to Impaired[1] Production of Red Cells

- **Aplastic anemia** results from bone marrow destruction and affects[2] all blood cells **(pancytopenia[3])**. It may be caused by drugs, toxins, viruses, radiation[4], or bone marrow cancer. Aplastic anemia has a high mortality rate[5] but has been treated[6] successfully with bone marrow transplantation[7].
- **Nutritional anemia** may result from a deficiency of vitamin B12 or folate, B vitamins needed for RBC development[8]. Most commonly, it is caused by a deficiency of iron, needed to make. Folate deficiency commonly appears in those with poor diet, in pregnant[9] and lactating[10] women, and in those who abuse[11] alcohol. Iron deficiency anemia results from poor diet[12], poor iron absorption[13], or blood loss. Both folate deficiency and iron deficiency respond to dietary supplementation[14].
- **Pernicious[15] anemia** is a specific form of B12 deficiency. It results from the lack of **intrinsic factor** (IF), a substance produced in the stomach that aids[16] in the intestinal absorption of B12. Pernicious anemia must be treated with regular B12 injections. Patients usually present with **symmetrical paresthesia[17]**.
- In **sideroblastic** anemia, adequate[18] iron is available, but the iron is not used properly to manufacture[19] hemoglobin. This disorder may be hereditary[20] or acquired, as by exposure to toxins or drugs. It may also be secondary[21] to another disease. The excess iron precipitates[22] out in immature red cells.

۱- مختل و معیوب
۲- اثر گذاشتن
۳- کاهش تمام سلول‌ها / ۴- اشعه
۵- میزان مرگ / ۶- درمان کردن
۷- پیوند عضو
۸- تشکیل / ۹- بارداری
۱۰- شیرده
۱۱- سوء مصرف
۱۲- رژیم
۱۳- جذب / ۱۴- مکمل غذایی
۱۵- کشنده
۱۶- کمک کردن
۱۷- بی‌حسی قرینه
۱۸- کافی
۱۹- ساختن / ۲۰- ارثی
۲۱- ثانویه به
۲۲- رسوب کردن

• Anemia due to Loss or Destruction of Red Cells

- **Hemorrhagic anemia** results from blood loss. This may be a sudden[1] loss, as from injury, or loss from chronic internal bleeding[2], as from the digestive tract in cases of ulcers[3] or cancer.
- **Thalassemia** is a hereditary disease that appears mostly in Mediterranean populations. A genetic mutation causes abnormal hemoglobin production and hemolysis (destruction) of red cells. Thalassemia is designated as α (alpha) or β (beta), according[4] to the part of the hemoglobin molecule affected.
- In **sickle cell anemia**, a mutation alters the hemoglobin molecule so that it precipitates (settles out) when it gives up oxygen, distorting the RBCs into a crescent[5] shape (Fig. 10- 12). The altered cells block small blood vessels and deprive[6] tissues of oxygen, an episode termed sickle cell crisis[7]. The misshapen[8] cells are also readily destroyed (hemolyzed). Genetic carriers of the defect, those with one normal and one abnormal gene, show sickle cell trait[9]. They usually have no symptoms, except when oxygen is low, such as at high altitudes[10]. They can, however, pass the defective gene to offspring[11].

۱- ناگهان
۲- خونریزی داخلی
۳- زخم‌ها
۴- با توجه به
۵- هلالی
۶- محروم کردن
۷- بحران
۸- بدشکل
۹- صفت
۱۰- ارتفاع بلند
۱۱- فرزندان

Reticulocyte counts are useful in diagnosing the causes of anemia. Reticulocytes are immature RBCs that normally appear as a small percentage of the total erythrocytes. An increase in the reticulocyte count indicates increased red cell formation, as in response to hemorrhage or cell destruction. A decrease in reticulocytes indicates a failure in red cell production, as caused by nutritional deficiency or aplastic anemia.

COAGULATION DISORDERS

The most common cause of coagulation problems is a deficiency in the number of circulating platelets, a condition termed **thrombocytopenia**[1] . Possible[2] causes include aplastic anemia, infections, bone marrow cancer, and agents that destroy bone marrow, such as x-rays or certain drugs. This disorder results in bleeding into the skin and mucous membranes, variously described as **petechiae** (pinpoint spots[3]), **ecchymoses** (bruises[4]), and **purpura** (blue lesions).

۱- کاهش پلاکت‌ها
۲- احتمالی
۳- نقاط سوزنی
۴- کبودی‌ها

In **disseminated intravascular coagulation (DIC)**, widespread[5] clotting in the vessels obstructs[6] circulation to the tissues. This is followed by diffuse hemorrhages as clotting factors are removed and the coagulation process is impaired. DIC may result from a variety of causes, including infection, cancer, hemorrhage, injury, and **allergy**.

۵- منتشر
۶- مسدود کردن

Hemophilia is a hereditary deficiency of a specific clotting factor. It is a genetically sex-linked[7] disease that is passed from mother to son. There is bleeding into the tissues, especially into the joints (hemarthrosis[8]). Hemophilia must be treated with transfusions of the necessary clotting factor.

۷- وابسته به جنس
۸- خونریزی به داخل مفصل

NEOPLASMS

Leukemia is a neoplasm of WBCs. The rapidly dividing but incompetent[1] white cells accumulate[2] in the tissues and crowd out the other blood cells. The symptoms of leukemia include anemia, fatigue, easy bleeding, **splenomegaly**[3], and sometimes hepatomegaly[4] (enlargement of the liver). The causes of leukemia are unknown[5] but may include exposure to radiation or harmful chemicals, hereditary factors, and perhaps viral infection. The two main categories of leukemia are determined by origin and the cells involved:

- Myelogenous leukemia originates in the bone marrow and involves mainly the granular leukocytes.
- Lymphocytic leukemia affects B cells and the lymphatic system, causing **lymphadenopathy**[6] (lymph node disease) and adverse effects on the immune system.

۱- نامناسب
۲- تجمع یافتن
۳- بزرگی طحال
۴- بزرگی کبد
۵- ناشناخته
۶- درگیری گره لنفاوی

Leukemias are further differentiated as acute or chronic based on clinical progress. Acute leukemia is the most common form of cancer in young children. The acute forms are:

- Acute myeloblastic (myelogenous) leukemia (AML). The prognosis[7] in AML is poor.
- Acute lymphoblastic (lymphocytic) leukemia (ALL). With treatment, the ALL remission[8] rate is high.

۷- پیش‌آگهی
۸- بهبودی

The chronic forms of leukemia are:

- Chronic myelogenous leukemia (CML) affects young to middle-aged adults.
- Chronic lymphocytic leukemia (CLL) appears mostly in the elderly and is the most slowly growing form of the disease.

Leukemia treatment includes chemotherapy, radiation therapy, and bone marrow transplantation. One advance[1] in transplantation is the use of umbilical cord[2] blood to replace blood-forming cells in bone marrow. This blood is more readily available than bone marrow and does not have to match as closely to avoid rejection[3] .

۱- پیشرفت
۲- بند ناف
۳- رد پیوند

Hodgkin disease is a disease of the lymphatic system that may spread[4] to other tissues. It begins with enlarged but painless[5] lymph nodes in the cervical (neck) region and then progresses[6] to other nodes. A feature[7] of Hodgkin disease is giant cells in the lymph nodes called **Reed–Sternberg.** Symptoms include fever, night sweats[8], weight loss, and skin itching (**pruritus**[9]). Persons of any age may be affected, but the disease predominates[10] in young adults and those over 50 years.

۴- منتشر شدن / ۵- بدون درد
۶- پیشرفت کردن / ۷- ویژگی
۸- تعریق شبانه / ۹- خارش
۱۰- شایع‌تر بودن

Non-Hodgkin lymphoma (NHL) is also a malignant[1] enlargement of lymph nodes but does not show Reed–Sternberg cells. It is more common than Hodgkin disease and has a higher mortality rate. Cases vary in severity[2] and prognosis. It is most prevalent[3] in the older adult population and in those with AIDS and other forms of immunodeficiency. NHL involves the T or B lymphocytes, and some cases may be related to infection with certain[4] viruses. It requires systemic chemotherapy and sometimes bone marrow transplantation.

Multiple myeloma is a cancer of the blood-forming cells in bone marrow, mainly the plasma cells that produce antibodies. The disease causes anemia, bone pain, and bone weakening. Patients have a greater susceptibility[5] to infection because of immunodeficiency. Abnormally high levels of calcium and protein in the blood often lead to kidney failure.

۱- بدخیم
۲- شدت
۳- شایع بودن
۴- مشخص و خاص
۵- مستعد بودن به

HYPERSENSITIVITY

Hypersensitivity[1] is a harmful overreaction[2] of the immune system, commonly known as **allergy.** In cases of allergy, a person is more sensitive[3] to a particular antigen than the average individual. Common **allergens** are pollen[4], animal dander[5], dust, and foods, but there are many more. A seasonal allergy to inhaled pollens is commonly called "hay fever[6]". Responses may include itching, redness, or tearing[7] of the eyes (conjunctivitis[8]), skin rash[9], asthma, runny nose[10] (rhinitis), sneezing[11], **urticaria**[12] (hives), and **angioedema**, a reaction similar to hives but involving deeper layers of tissue.

An **anaphylactic reaction** is a severe generalized allergic response that can rapidly lead to death as a result of shock and respiratory distress. It must be treated by immediate administration of **epinephrine (adrenaline)** and maintenance of open airways. Oxygen, antihistamines, and corticosteroids may also be given. Common causes of anaphylaxis are drugs, especially penicillin and other antibiotics, vaccines, diagnostic chemicals, foods, and insect venom.

A **delayed hypersensitivity reaction** involves T cells and takes at least 12 hours to develop. A common example is the reaction to contact with plant irritants[13] such as those of poison ivy and poison oak.

۱- ازدیاد حساسیت
۲- واکنش بیش از حد
۳- حساس
۴- گرد گل و گیاه
۵- شوره حیوان
۶- تب یونجه
۷- اشک ریزش
۸- التهاب ملتحمه
۹- بثورات پوستی
۱۰- آبریزش بینی
۱۱- عطسه / ۱۲- کهیر
۱۳- محرک‌ها

IMMUNODEFICIENCY

The term **immunodeficiency** refers to any failure in the immune system. This may be congenital[1] (present at birth) or acquired and may involve any components of the system. The deficiency may vary in severity but is always evidenced by an increased susceptibility to disease.

Acquired immunodeficiency syndrome (AIDS) is acquired by infection with **human immunodeficiency virus (HIV)**, which attacks certain T cells. These cells have a specific surface attachment[2] site, the CD4 receptor, for the virus. HIV is spread by sexual contact[3], use of contaminated[4] needles, blood transfusions, and passage[5] from an infected mother to her fetus. It leaves the host susceptible to opportunistic[6] infections such as pneumonia caused by the fungus *Pneumocystis jirovecii*; thrush[7], an oral fungal infection; and infection with *Cryptosporidium*, a protozoon that causes cramps[8] and diarrhea[9]. It also predisposes[10] the patient to **Kaposi sarcoma**, a rare form of skin cancer. AIDS may also induce autoimmunity or attack the nervous system.

AIDS is diagnosed and monitored by **CD4+ T lymphocyte counts**, a measure[11] of cells with the HIV receptor. A count of less than 200/mcL of blood signifies[12] severe immunodeficiency. HIV antibody levels and direct viral blood counts are also used to track the disease's course[13]. At present there is no vaccine or cure for AIDS, but drugs can delay[14] its progress.

۱- مادرزادی
۲- اتصال
۳- تماس جنسی
۴- آلوده
۵- عبور
۶- فرصت طلب
۷- برفک
۸- گرفتگی عضلات
۹- اسهال
۱۰- مستعد کردن
۱۱- اندازه گیری کردن
۱۲- نشان دادن
۱۳- سیر بیماری
۱۴- به تاخیر انداختن

■ AUTOIMMUNE DISEASES

A disorder that results from[1] an immune response to one's own tissues is classified as an **autoimmune disease**. The cause may be a failure in the immune system or a reaction to body cells that have been slightly[2] altered by mutation or disease. The list of diseases that are believed to be caused, at least in part, by autoimmunity is long. Some, such as **systemic lupus erythematous** (SLE), **systemic sclerosis** (scleroderma), and **Sjögren syndrome**, affect tissues in multiple systems. Others target more specific organs or systems. Examples are pernicious anemia, rheumatoid arthritis, Grave's disease (of the thyroid), myasthenia gravis (a muscle disease), fibromyalgia syndrome (a musculoskeletal disorder), rheumatic heart disease, and glomerulonephritis (a kidney disease).

۱- ناشی از
۲- اندکی

خب حالا که کلی لغت یاد گرفتی یه دوره کلی هم بکنیم از چیزایی که تو این درس یاد گرفتیم و بعد هم تست و سپس بازی!!

1. The engulfing of foreign material by white cells
2. A hematoma is a localized collection of _______
3. A myeloma is a neoplasm that involves the
4. Urticaria is commonly called _______
5. Stoppage of blood flow
6. Able to dissolve a clot
7. Deficiency in the amount of hemoglobin in the blood
8. enlargement of the spleen
9. An increase in the number of monocytes in the blood
10. Presence of pus in the blood

Answer: 1. Phagocytosis / 2. Blood / 3. Bone marrow / 4. Hives / 5. Hemostasis / 6. Thrombolytic / 7. Anemia / 8. Splenomegaly / 9. Monocytosis / 10. Pyemia

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. Patients with pernicious anemia usually present with symmetrical ....

قطب اهواز- اسفند ۹۵

A) Jaundice
B) Pallor
C) Blood loss
D) Paresthesia

2. Which of the following conditions refers to "minute, pinpoint hemorrhage under the skin"?

شهریور ۹۷-قطب شهید بهشتی

A) Soriasis
B) Pruritus
C) Pediculosis
D) Petechia

3. Extrapolation of blood into a joint or its synovial cavity is referred to as ....

قطب شیراز- اسفند ۹۴

A) hemarthrosis
B) hematochyloria
C) hematidrosis
D) hemangioma

4. Predicting the outcome of a disease for better follow up and understanding the course of the disease is called ....

قطب شمال - اسفند ۹۳

A) Outstanding
B) Prognosis
C) Prevention
D) Diagnosis

(Outstanding: بی‌نظیر / Prevention: پیشگیری / Diagnosis: تشخیص)

5. His disease was in a state of ..... for about a year, but unfortunately the growth of a new tumor reversed the condition.

شهریور ۹۷- قطب شمال

A) Integration
B) Remission
C) Induction
D) Convulsion

(Integration: ادغام / Induction: القا / Convulsion: تشنج)

6. Since birth he has had 15 arm and leg fracture as result of his .... Disease.

قطب آزاد- اسفند ۹۴

A) intra medullar
B) mandibular
C) congenital
D) circumferential

7. Since HIV .... the immune system, patients often fall victim to illnesses such as pneumocystis pneumonia, tuberculosis, and other infections.

قطب تبریز - اسفند ۹۶

A) Repairs
B) impairs
C) despairs
D) prepares

(Repairs: تعمیر کردن / despairs: ناامید شدن / prepares: آماده شدن)

8. People with diabetes are .... to infections.

شهریور ۹۷ - قطب اهواز

A) Immune
B) Resistant
C) Susceptible
D) Unaffected

(Immune: ایمن بودن / Resistant: مقاوم بودن / Unaffected: تاثیرنگرفته)

Answers: 1. D / 2. D / 3. A / 4. B / 5. B / 6. C / 7. B / 8. C

حالا که کامل این مبحث رو یاد گرفتی یه متن از **«پزشکی شهریور ۹۷ - قطب مشهد»** بزنین که به این مبحث مربوط میشد.

Iron deficiency has long been associated with fatigue and impaired physical work capacity. The current recognition[1] of the roles[2] played by iron in the body's response to exercise stress has provided a clearer understanding of the importance of adequate iron nutriture[3] for the athlete[4].

Physical activity lasting[5] more than several minutes is dependent[6] on an adequate supply of oxygen to exercising muscle for the energy derived[7] from aerobic[8] metabolism. It is no surprise, then, that anemia resulting from iron deficiency can profoundly[9] impair exercise performance[10]. This effect of reducing[11] work capacity[12] along with reduction in maximal oxygen uptake[13] has repeatedly been documented in both animal and human studies. Although it might be supposed that lowered oxygen content[14] of the blood is responsible[15], other factors are also important. For instance[16], lowered blood viscosity and decreased systemic vascular resistance increase resting cardiac output in the anaeheamoglobin levels of 11.0 mic subject, limiting[17] cardiac reserve with exercise. Even small reduction in hemoglobin concentration can significantly[18] impair exercise performance.

۱- شناسایی / ۲- نقش‌ها
۳- مواد مغذی
۴- ورزشکار
۵- طول کشیدن
۶- بستگی داشتن / ۷- گرفته شده
۸- هوازی
۹- عمیقا / ۱۰- عملکرد
۱۱- کاهش
۱۲- ظرفیت
۱۳- برداشت / ۱۴- محتوا
۱۵- مسئول / ۱۶- به عنوان مثال
۱۷- محدود کردن
۱۸- قابل توجه

1. According to this passage ....

A) Extreme tiredness bears no relationship with iron deficiency
B) The importance of adequate iron nutriture for the athlete is suspected
C) There is an association between physical activity and physical capacity
D) Iron plays an important function in the capacity development

(Bears: دارا بودن)

2. The increased resting cardiac output is due to ....

A) Diminished blood viscosity
B) Increased systemic vascular resistance
C) Increased oxygen intake
D) The performance of a definite exercise

(Diminish: کاهش / Definite: قطعی)

3. Exercise performance may be impaired by ....

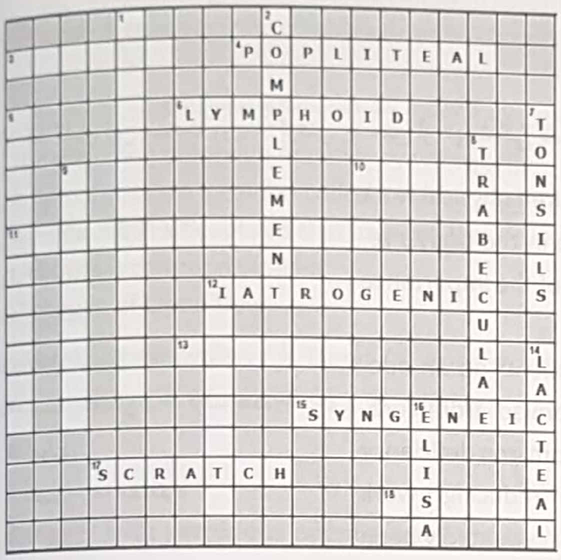
A) Continuing activity more than several minutes
B) Decrease in haemogolobin concentration
C) Adequate supply of oxygen
D) Energy from aerobic metabolism

Answers: 1. D / 2. A / 3. B

اینم جهت ایجاد انگیزه در تو که این فصل رو تموم کردی! یه جدول با موضوع همین فصل!

Across

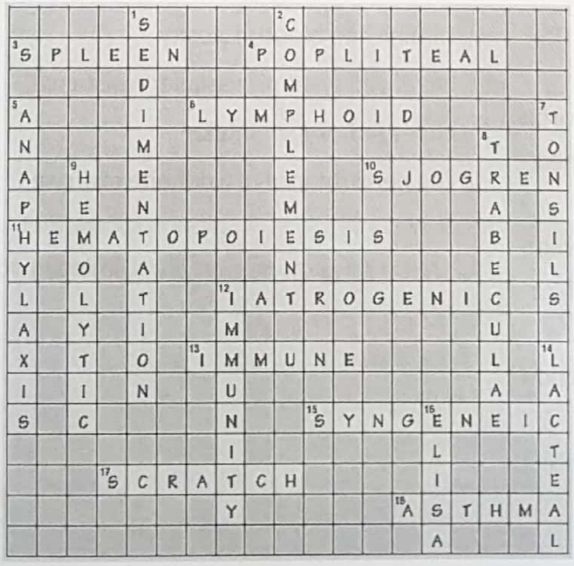
3. The largest structure of the lymphatic system
4. Term indicating location behind the knee
6. Term used to refer to immune system organs and tissues
10. Eponym for the second most common autoimmune rheumatoid disorder
11. Process by which stem cells develop into blood cells or immune system cells
12. Immunodeficiency introduced by a medical treatment
13. Response activated by microorganisms
15. The type of transplant of marrow between identical twins
17. Tests that introduce allergens to the skin using a special tool, with results examined 30 to 40 minutes later.
18. A chronic, reactive airway disorder



Down

1. The "S" in ESR
2. A group of 20 protein compounds that activate to destroy invading cells
5. Exaggerated systemic reaction of the immune system
7. Masses of lymphatic tissue located at the back of the mouth and throat
8. Bands of connective tissue
9. Reactions that follow transfusion of mismatched blood
12. The body's capacity to resist invading organisms and toxins
14. Lymphatic vessel located in the small intestine
16. Acronym for test that identifies antibodies to bacteria, among others

اینم جوابش:



فصل ۹ دستگاه تنفسی

Unit 9 Respiratory System

این درس راجع به دستگاه تنفسی هست که میخوایم باز ساختار و عملکرد و همچنین بیماری‌هاشو یه دور دوره کنیم. هم فاله هم تماشا!

◈ بررسی دستگاه تنفسی از نظر ساختاری و عملکردی:

■ INTRODUCTION

The main function of the respiratory system is to provide oxygen to body cells for energy metabolism and to eliminate[1] **carbon dioxide**, a byproduct of metabolism. Because these gases must be carried to and from the cells in the blood, the respiratory system works closely with the cardiovascular system to accomplish[2] gas exchange[3]. This activity has two phases:

- External[4] gas exchange occurs between the outside atmosphere and the blood.
- Internal[5] gas exchange occurs between the blood and the tissues.

External exchange takes place in the **lungs**, located in the thoracic cavity[6]. The remainder of the respiratory tract consists of a series of passageways that conduct air to and from the lungs. No gas exchange occurs in these regions.

۱- حذف
۲- به انجام رساندن
۳- تبادل گاز
۴- خارجی
۵- داخلی
۶- حفره

■ UPPER RESPIRATORY PASSAGEWAYS

The upper respiratory passageways consist of the **nose** and **pharynx** (throat). Air can also be exchanged through the mouth, but there are fewer mechanisms for cleansing[1] the air taken in by this route[2].

۱- پاکسازی
۲- مسیر

• The Nose

Air enters through the nose, where it is warmed, filtered, and moistened[1] as it passes over the hair-covered[2] mucous membranes of the nasal cavity. Cilia[3]—microscopic hair-like projections from the cells that line the nasal passageways—sweep[4] dirt and foreign material toward the throat for elimination. Material that is eliminated from the respiratory tract by coughing or clearing the throat is called **sputum**[5].

In the bones of the skull and face near the nose are air-filled cavities lined with a mucous membrane that drain into the nasal cavity. These chambers lighten[6] the bones and provide resonance for speech production. These cavities, called **sinuses**, are named specifically for the bones in which they are located, such as the frontal, sphenoidal, ethmoidal, and maxillary sinuses. Together, because they are near the nose, these cavities are referred to as the paranasal sinuses.

۱- مرطوب شدن
۲- با پوشش مو
۳- مژک‌ها
۴- جارو کردن
۵- خلط
۶- سبک کردن

• The Pharynx

Inhaled[1] air passes into the throat, or pharynx[2], where it mixes with air that enters through the mouth and also with food destined for the digestive tract. The pharynx is divided into three regions:

- The nasopharynx is the superior portion located behind the nasal cavity.
- The oropharynx is the middle portion located behind the mouth.
- The laryngopharynx is the inferior portion located behind the **larynx**.

۱- استنشاق شده
۲- حلق

LOWER RESPIRATORY PASSAGEWAYS AND LUNGS

Air moves from the pharynx into the larynx[1], commonly called the voice box, because it contains the **vocal folds**[2], or cords[3]. The larynx is at the top of the **trachea**, commonly called the windpipe[4], which conducts air into the bronchial system toward the lungs.

۱- حنجره / ۲- چین‌های صوتی
۳- طناب‌ها / ۴- نای، لوله هوا

• The Larynx

The larynx is shaped by nine cartilages[1], the most prominent[2] of which is the anterior thyroid cartilage that forms the "Adam's apple". The small leaf-shaped cartilage at the top of the larynx is the **epiglottis**. When one swallows, the epiglottis covers the opening of the larynx and helps to prevent food from entering the respiratory tract.
The larynx contains the vocal folds, bands of tissue that are important in speech production. Vibrations[3] produced by air passing over the vocal folds form the basis for voice production, although portions of the throat and mouth are needed for proper[4] speech articulation[5]. The opening between the vocal folds is the **glottis** (the epiglottis is above the glottis).

۱- غضروف
۲- برجسته
۳- ارتعاشات
۴- صحیح
۵- تکلم

• The Trachea

The trachea is a tube reinforced with C-shaped rings of cartilage to prevent its collapse[1]. Cilia in the trachea's lining move impurities[2] up toward the throat, where they can be eliminated by swallowing or by **expectoration**[3], coughing them up.
The trachea is contained in a region known as the **mediastinum**, which consists of the space between the lungs together with the organs contained in this space. In addition to the trachea, the mediastinum contains the heart, esophagus, large vessels, and other tissues.

۱- فروپاشی
۲- ناخالصی
۳- خلط

• The Bronchial System

At its lower end, the trachea divides into a right and a left primary **bronchus**, which enter the lungs. The right bronchus is shorter and wider[1]; They divide into secondary bronchi (*plural of bronchus*). Further[2] divisions[3] produce an increasing number of smaller tubes that supply air to smaller subdivisions of lung tissue. As the air passageways progress through the lungs, the cartilage in the walls gradually disappears and is replaced by smooth (involuntary[4]) muscle.
The smallest of the conducting tubes, the **bronchioles**, carry air into the microscopic air sacs, the **alveoli**, through which gases are exchanged between the lungs and the blood. It is through the ultrathin walls of the alveoli and their surrounding capillaries that **oxygen** diffuses[5] into the blood and carbon dioxide diffuses out of the blood for elimination.

۱- پهن‌تر
۲- بیشتر
۳- تقسیمات
۴- غیرارادی
۵- منتشر شدن

• The Lungs

The cone-shaped lungs occupy[1] the major portion of the thoracic cavity. The right lung is larger and divided into three lobes. The left lung, which is smaller to accommodate[2] the heart, is divided into two lobes. The lobes are further subdivided to correspond[3] to divisions of the bronchial network.
A double membrane, the **pleura**, covers the lungs and lines the thoracic cavity. There are two pleural layers. The very narrow, fluid-filled space between the two layers is the **pleural space**. The moist pleural membranes slide[4] easily over each other within the chest cavity, allowing the lungs to expand[5] during breathing.

۱- اشغال کردن
۲- جا دادن
۳- مطابق
۴- لیز خوردن
۵- متسع شدن

■ BREATHING

Air is moved into and out of the lungs by the process of breathing, technically called **pulmonary ventilation**[1]. This consists of a steady[2] cycle of **inspiration** (inhalation[3]) and **expiration** (exhalation[4]), separated by a period of rest. Breathing is normally regulated unconsciously[5] by centers in the brainstem. These centers adjust the rate and rhythm of breathing according[6] to changes in the blood composition[7], especially the concentration of carbon dioxide.

The measure of how easily the lungs expand under pressure is **compliance**[8]. Fluid produced in the lungs, known as **surfactant**, aids in compliance by reducing surface tension[9] within the alveoli.

۱- تهویه
۲- مداوم
۳- دم / ۴- بازدم
۵- به طور ناخودآگاه
۶- با توجه به / ۷- ترکیب
۸- ظرفیت
۹- کشش سطحی

■ GAS TRANSPORT

Oxygen is carried in the blood bound[1] to **hemoglobin** in red blood cells. The oxygen is released to the cells as needed. Carbon dioxide is carried in several ways but is mostly converted[2] to **carbonic acid**. The amount of carbon dioxide that is exhaled is important in regulating the blood's acidity or alkalinity, based on the amount of carbonic acid that is formed. Dangerous shifts[3] in blood pH can result from exhalation of too much or too little carbon dioxide.

۱- متصل شدن
۲- تبدیل شدن
۳- تغییر

حالا هم یه سری سافیکس (پسوند) و روت (ریشه) راجع به **سیستم تنفس** بخونیم ببینیم چه خبره.

Root or Suffix	Meaning	Example	Definition of Example
-pnea	breathing (تنفس)	dyspnea (دیس‌پنه)	تنگی نفس، درد یا دشواری در تنفس
-oxia	level of oxygen (سطح اکسیژن)	hypoxia (هایپوکسی)	کاهش میزان اکسیژن بافت‌ها
-capnia	level of carbon dioxide (سطح کربن دی‌اکسید)	hypocapnia (هایپوکپنیا)	کاهش کربن دی‌اکسید بافت‌ها
-phonia	voice (صدا)	aphonia (آفونیا)	از دست دادن صدا
nas/o	nose (بینی)	intranasal (اینترانازال)	درون بینی
rhin/o	nose (بینی)	rhinoplasty (رینوپلاستی)	ترمیم (plasty) بینی
laryng/o	larynx (حنجره)	laryngospasm (لارینگواسپاسم)	اسپاسم (انقباض ناگهانی) حنجره
trache/o	trachea (نای)	tracheotome (تراکئوتوم)	ابزاری جهت برش در نای
bronch/o, bronch/i	bronchus (نایژه)	bronchogenic (برونکوژنیک)	ناشی از برونش
bronchiol	bronchiole (نایژک)	bronchiolectasis (برونشیولکتازی)	اتساع (-ectasis) برونشیول‌ها

اینم بدون که اگر خواستیم سطح اکسیژن و کربن دی‌اکسید خون رو بگیم آخرش یه (emia-) اضافه میکنیم، مثلا hypoxemia (کاهش اکسیژن خون) یا مثلا hypercapnemia (افزایش کربن دی‌اکسید خون). چندتا ریشه راجع به خود ریه هم یاد بگیریم:

Root	Meaning	Example	Definition of Example
phren/o	دیافراگم	phrenic (فرنیک)	مربوط به دیافراگم
phrenic/o	عصب فرنیک	phrenicectomy (فرنیککتومی)	برداشت بخشی از عصب فرنیک
pleur/o	پلور، پرده جنب	pleurodesis (پلورودسیس)	جوش خوردن یا ادغام پلور
pulm/o, pulmon/o	ریه	extrapulmonary (اکستراپولمونری)	خارج از ریه‌ها
pneumon/o	ریه	pneumonitis (پنومونیتیس)	التهاب ریه، پنومونی
pneum/o, pneu-mat/o	هوا، گاز ریه، تنفس	pneumothorax (پنوموتوراکس)	وجود هوا در قفسه سینه
spir/o	تنفس	spirometer (اسپیرومتر)	ابزاری برای اندازه گیری حجم‌های تنفسی

وقته تمرینههههههه. ببین چقدر یاد گرفتی ☺

1. breathing difficulty that is relieved by assuming an upright position (ortho-)
2. slow (brady-) rate of breathing easy
3. normal (eu-) breathing
4. painful or difficult breathing
5. discharge (-rrhea) from the nose
6. Pain (-algia) in the pleura
7. Space between the lungs
8. Substance that reduce surface tenstion
9. Sputum
10. The trachea divides into a right and a left primary ______
11. Plural of the bronchus is ______
12. A tube placed within the trachea

Answer: 1. Orthopnea / 2. Bradypnea / 3. eupnea / 4. Dyspnea / 5. Rhinorrhea / 6. Pleuraglia / 7. Mediastinum / 8. Surfactant / 9. Expectoration / 10. Bronchus / 11. Bronchi / 12. Enolatracheal

سخت که نبود؟ قشنگ رو این مبحث مسلط شدی هرچی بهت بدن دیگه میتونی جواب بدی.

1. Which of the following terms refers to the ability to breathe comfortably only when in an upright position?

قطب همدان - اسفند ۹۷

A) Orthopnea
B) Apnea
C) Dyspnea
D) Hypercapnia

2. Which of the following is the CORRECT spelling for the plural of bronchus?

قطب شیراز - اسفند ۹۷

A) Bronchuses
B) Bronchi
C) Bronchae
D) Broncha

3. Carbon dioxide .... From the blood within the pulmonary capillaries and enters the alveolar space.

A) diffuses
B) declines
C) predicts
D) detects

(declines: کاهش یافتن / predicts: پیش بینی کردن / detects: شناسایی کردن)

قطب شمال - اسفند ۹۷

4. Small changes in airway caliber, such as those caused by pulmonary .... can produce a marked increase in airway resistance.

A) Respiration
B) secretion
C) promotion
D) instruction

(Respiration: تنفس / promotion: ارتقا / instruction: دستور العمل)

قطب مشهد - اسفند ۹۷

5. .... is the coughing up and spitting out of material from the lungs.

A) Expectoration
B) Pertussis
C) Hemoptysis
D) Hematemesis

(Hematemesis : استفراغ خونی)

قطب کرمان - شهریور ۹۳

6. Beside exerting other important effects, surfactant increases lung ......, i.e. ease of inflation.

A) tension
B) collapse
C) compliance
D) secretion

قطب مشهد - شهریور ۹۶

7. Heart failure can reportedly contribute to pulmonary ...., that is excess fluid in the lungs.

A) deflation
B) compliance
C) permeability
D) oedema

پزشکی میان‌دوره کشوری - دی ۹۹

8. Absence of breathing is referred to as apnea while shortness of breath is called ....

A) orthopnea
B) tachypnea
C) sleep apnea
D) dyspnea

قطب تبریز - اسفند ۹۳

Answers: 1. A / 2. B / 3. A / 4. B / 5. A / 6. C / 7. D / 8. D

◈ بررسی دستگاه تنفسی از نظر بالینی:

INTRODUCTION

Any disorder that causes resistance[1] to airflow through the respiratory tract or that limits chest expansion[2] will affect pulmonary function. These disorders may involve the respiratory system directly, such as infection, injury, allergy, **aspiration** (inhalation) of foreign bodies, or cancer; they may also originate in other systems, such as in the skeletal, muscular, cardiovascular, or nervous systems.

As noted above, changes in ventilation can affect the blood's pH (acidity or alkalinity). If too much carbon dioxide is exhaled by **hyperventilation**, the blood tends to become too alkaline, a condition termed **alkalosis**. If too little carbon dioxide is exhaled as a result of **hypoventilation**, the blood tends to become too acidic, a condition termed **acidosis**.

۱- مقاومت
۲- اتساع

INFECTIONS

A variety of organisms infect the respiratory system. Childhood immunizations have dramatically[1] reduced the incidence of some infectious respiratory diseases, such as **diphtheria** and **pertussis**[2] (Whooping cough[3]).

۱- به طور چشم گیر
۲- سیاه سرفه
۳- سرفه‌های بلند

• Pneumonia

Pneumonia is caused by many different microorganisms, usually bacteria or viruses. Viral pneumonia is more diffuse. There are two forms of pneumonia:

Lobar pneumonia, an acute disease, involves one or more lobes of the lung. Bronchopneumonia (bronchial pneumonia) occurs throughout the lung. It begins in terminal bronchioles that become clogged[1] with exudate[2] and form consolidated[3] (solidified) patches.

Pneumonia can usually be treated successfully in otherwise healthy people, but in debilitated[4] patients, it is a leading cause of death. Immunocompromised[5] patients, such as those with AIDS, are often subject to a form of fungal pneumonia called *Pneumocystis* pneumonia (PCP).

The term *pneumonia* is also applied[6] to noninfectious lung inflammation, such as that caused by asthma, allergy, or inhalation of irritants[7]. In these cases, however, the more general term **pneumonitis** is often used.

۱- مسدود شدن
۲- اگزود، ترشح التهابی
۳- متراکم
۴- ناتوان، ضعیف
۵- دارای ضعف ایمنی
۶- به کار برده شدن، استفاده شدن
۷- محرک‌های آزارنده

• Tuberculosis

The incidence of tuberculosis (TB) has increased in recent years, along with the increase of AIDS and the appearance[1] of antibiotic resistance in the causative[2] organism, Mycobacterium tuberculosis (MTB). The name tuberculosis comes from the small lesions, or tubercles, that characterize[3] the infection. The tubercles can liquefy[4] in the center and then rupture to release bacteria into the bloodstream. Generalized TB is known as miliary[5] tuberculosis because of the many tubercles that are the size of millet[6] seeds in infected tissue.

TB symptoms include fever, weight loss, weakness, cough, and hemoptysis[7], the coughing up of blood-containing sputum. Accumulation of exudate in the alveoli may result in consolidation of lung tissue. Active TB is diagnosed by chest x-ray and laboratory culture of sputum samples to isolate, stain[8], and identify any causative organisms. If found, the organisms can be tested for drug susceptibility[9]. These laboratory studies can take up to eight weeks, as the TB organism is very slow-growing, so clinicians also use several quick tests to identify tuberculosis infections.

۱- ظهور
۲- عامل
۳- مشخص شدن، دارای ویژگی
۴- مایع شدن
۵- ارزنی
۶- ارزن
۷- خلط خونی
۸- رنگ آمیزی
۹- مستعد بودن، حساس بودن

• Influenza

Influenza ("flu") is a viral respiratory disease associated with chills[1], fever, headaches, muscular aches[2], and cold-like symptoms. It usually resolves in several days, but severe forms of influenza have caused fatal[3] pandemics, most recently in 1918, 1957, and 1968 . The virus can mutate[4] readily and spread among animals, such as birds or pigs, and humans.

Because influenza viruses change so rapidly, scientists must prepare vaccines against the strains[5] most likely to cause an epidemic in any given year. The virus strains are grouped into categories A to C, with A the most severe and C the least. They are further designated H and N with numbers, such as H3N2 and H5N1 . The "H" and "N" represent surface proteins that the virus uses to infect a host.

Medical personnel combat influenza with vaccines, isolation of infected populations, destruction of infected animals, and antiviral medications.

۱- لرز
۲- درد
۳- کشنده
۴- جهش یافتن
۵- سوش، گونه

■ EMPHYSEMA

Emphysema is a chronic disease associated with overexpansion and destruction of the alveoli. Common causes are exposure[1] to cigarette smoke and other forms of pollution as well as chronic infection. Emphysema is the main disorder included under the heading of **chronic obstructive pulmonary disease (COPD)**. Other condition included in this category is chronic **bronchitis**.

۱- در معرض بودن

ASTHMA

Asthma attacks result from narrowing of the bronchial tubes. This constriction, along with edema (swelling) of the bronchial linings, inflammation, and mucus accumulation, results in wheezing, extreme **dyspnea** (difficulty in breathing), and **cyanosis** (Bluish discoloration of the skin caused by lack of oxygen in the blood).

Asthma is most common in children. Although its causes are uncertain, a main factor is irritation caused by allergy. Heredity[1] may also play a role. Treatment of asthma includes:

1. removal of allergens
2. administration of bronchodilators[2] to widen[3] the airways
3. administration[4] of corticosteroids to reduce inflammation

۱- ارث

۲- متسع کننده‌ی برونش

۳- گشاد کردن، باز کردن

۴- تجویز

PNEUMOCONIOSIS

Chronic irritation and inflammation caused by dust inhalation is termed **pneumoconiosis.** This is an occupational hazard[1] seen mainly in people working in mining[2] and stone-working industries[3]. Different forms of pneumoconiosis are named for the specific type of dust inhaled: silicosis (silica or quartz), anthracosis (coal dust), and asbestosis (asbestos fibers).

۱- خطر شغلی

۲- معدن کاری

۳- صنایع، کارخانه‌ها

LUNG CANCER

Lung cancer is the leading cause of cancer-related deaths in both men and women. The incidence of lung cancer has increased steadily[1] over the past 50 years, especially in women. Cigarette smoking is a major risk factor in this as well as other types of cancer. The most common form of lung cancer is squamous carcinoma, originating in the lining[2] of the bronchi (bronchogenic). Lung cancer usually cannot be detected early, and it metastasizes rapidly. The overall[3] long-term[4] survival[5] rate is low.

۱- مداوم

۲- پوشش

۳- کلی

۴- طولانی مدت

۵- بقا

RESPIRATORY DISTRESS SYNDROME

Respiratory distress syndrome (RDS) of the newborn occurs in premature[1] infants and is the most common cause of death in this group. It results from a lack of lung surfactant, which reduces compliance. **Acute respiratory distress[2] syndrome (ARDS),** also known as *shock lung*, may result from trauma, allergic reactions, infection (Like COVID-19), and other causes. It involves edema that can lead to respiratory failure and death if untreated[3].

۱- نارس

۲- زجر تنفسی

۳- درمان نشده

PLEURAL DISORDERS

Pleurisy (پلورزی), also called pleuritis, is an inflammation of the pleura, usually associated with infection. Pain is the common symptom of pleurisy. Because this pain is intensified[1] by breathing or coughing as the inflamed membranes move, breathing becomes rapid and shallow[2]. Analgesics and anti-inflammatory drugs are used to treat the symptoms of pleurisy.

As a result of injury, infection, or weakness in the pleural membrane, substances may accumulate between the layers of the pleura. When air or gas collects in this space, the condition is termed pneumothorax. Compression[3] may cause collapse of the lung, termed atelectasis.

In **pleural effusion**, other materials accumulate in the pleural space. Depending on the substance involved, these are described as **empyema** (pus[4]), also termed **pyothorax**; **hemothorax** (blood); or **hydrothorax** (fluid). Causes of these conditions include injury, infection, heart failure, and pulmonary embolism. **Thoracentesis**, needle puncture[5] of the chest to remove fluids, or fusion[6] of the pleural membranes (pleurodesis) may be required. A chest tube may be inserted to remove air and fluid from the pleural space.

۱- تشدید شدن

۲- کم عمق

۳- فشار

۴- چرک

۵- سوراخ کردن

۶- ادغام شدن

یه دونه به هم وصل کنید حل کن حالت جا بیاد! تعریفهای توی این تمرین‌ها هم مهمه هاااا! میتونه سوال علوم پایه ازش طرح شه!

__ 1. Atelectasis
__ 2. Emphysema
__ 3. Hypercapnia
__ 4. Hypopnea
__ 5. Pertussis

A. pulmonary disease with destruction of alveoli
B. increased carbon dioxide in the blood
C. decreased rate and depth of breathing
D. whooping cough
E. incomplete expansion of lung tissue

Answer: 1. E / 2. A / 3. B / 4. C / 5. D

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. Lack of oxygen due to insufficiency of respiratory tract causes changes in skin coloration. What is called this condition?

قطب شمال، اصفهان، شیراز - اسفند ۹۶

A) Hypoxia
B) Hypoxemia
C) Cyanosis
D) Erythema

2. Inhaling a foreign substance into the upper respiratory tract can cause .... pneumonia.

ریفرم قطب تبریز - شهریور ۹۸

A) inhalation
B) aspiration
C) inspiration
D) respiration

3. In addition to antibiotics, several mechanical techniques are used to dislodge sputum and .... its expectoration.

میان دوره‌ای کشوری - آذر ۹۷

A) flout
B) encourage
C) perforate
D) clench

(flout: توهین کردن / encourage: تقویت کردن
perforate: سوراخ کردن، clench: گره، انقباض)

4. "Hemoptysis" is a condition that can be defined as ......

قطب همدان - شهریور ۹۷

A) Drooping eyelids
B) Spitting of blood
C) Blue nail beds
D) Discoloration of skin

5. Plants can help reduce the .... of respiratory diseases as well as lung cancer.

قطب تهران و اصفهان - اسفند ۹۷

A) commitment
B) assurance
C) incidence
D) consensus

(commitment: تعهد / assurance: تضمین / consensus: توافق)

6. An inflammation of the voice box that is most often caused by respiratory infection or irritants such as cigarette smoke is referred to as ....

قطب همدان - شهریور ۹۳

A) Pharyngitis
B) Cholecystitis
C) Bronchitis
D) Laryngitis

7. Pleural ....is an abnormal accumulation of fluid in the chest or on the lungs.

قطب کرمان - اسفند ۹۳

A) Effusion
B) Perfusion
C) Infusion
D) Profusion

(Perfusion: تزریق کردن / Infusion: تزریق، خیساندن / Profusion: فراوانی)

8. A chronic pulmonary disease characterized by enlargement and destruction of the alveoli is called:

قطب مشهد - اسفند ۹۴

A) Emphysema
B) Pneumothorax
C) Pneumoconiosis
D) Cystic fibrosis

9. A disease caused by inhaling dust particles, including coal dust, stone dust, iron dust and asbestos particles is referred to as ....

قطب تبریز - اسفند ۹۴

A) pneumoconiosis
B) epistaxis
C) rhonchus
D) atelectasis

10. The presence of the air in the thorax is termed ....

قطب همدان - اسفند ۹۴

A) pneumonitis
B) pneumothorax
C) thoracocentesis
D) thoracostomy

11. A collection of pus in the space between the lung and the inner surface of the chest wall is called................

قطب تهران - اسفند ۹۵

A) Glycosuria
B) emphysema
C) myxedema
D) empyema

12. Pleural effusions may occur as part of the general process of fluid .... Accompanying cardiac failure.

قطب تبریز - شهریور ۹۵

A) retention
B) detection
C) protection
D) induction

(induction: القا / protection: محافظت / detection: شناسایی)

13. Congenital ...... can result from a failure of the lungs to expand completely.

پزشکی کشوری - شهریور ۹۹

A) atelencephalia
B) pulmolith
C) tracheotomy
D) atelectasis

14. Parents should be encouraged to protect their children from all factors which might possibly............an asthma attack.

قطب شمال - اسفند ۹۵

A) pretend
B) preserve
C) provoke
D) prefer

(pretend: تظاهر کردن / preserve: حفظ کردن)
(provoke: تحریک کردن / prefer: ترجیح دادن)

Answers: 1. C / 2. B / 3. B / 4. B / 5. C / 6. D / 7. A / 8. A / 9. A / 10. B / 11. D / 12. A / 13. D / 14. C

اینم یه متن ریوی از «**پزشکی اسفند ۹۵ - قطب همدان**» با موضوع آسم. بزن ببین چطوریه!

Asthma is a syndrome characterized by airflow obstruction that varies markedly[1], both spontaneously and with treatment. Asthmatics harbor[2] special type of inflammation in the airways that makes them more responsive[3] than non-asthmatics to a wide range of triggers[4], leading to excessive narrowing with consequent[5] reduced airflow and symptomatic wheezing and dyspnea. Narrowing of the airways is usually reversible[6], but in some patients with chronic asthma there may be an element of irreversible airflow obstruction. The increasing global prevalence[7] of asthma, the large burden[8] it now imposes[9] on patients, and the high health care costs have led to extensive[10] research into its mechanisms and treatment.

Asthma in one of the most common chronic diseases globally and currently affects ~ 300 million people. The prevalence of asthma has risen in affluent[11] countries over the last 30 years but now appears to have stabilized, with ~ 10- 1296 of adults and 15 % of children affected by the disease. In developing countries where the prevalence of asthma had been much lower there is a rising incidence that appears to be associated with increased urbanization[12]. The prevalence of atopy and other allergic diseases has also increased over the same time, suggesting that the reasons for the increase are likely to be systemic rather than confined[13] to the lungs. This epidemiologic observation suggests that there is a maximum number of individuals in the community[14] who are liable[15] to be effected by asthma, likely by genetic predisposition[16].

۱- قابل توجه
۲- پناه دادن، داشتن
۳- واکنشی، پاسخگو / ۴- محرک‌ها
۵- متعاقب / ۶- برگشت پذیر
۷- شیوع
۸- بار
۹- تحمیل کردن
۱۰- وسیع
۱۱- ثروتمند
۱۲- شهری شدن
۱۳- محدود شدن
۱۴- جامعه
۱۵- محتمل به
۱۶- استعداد ژنتیکی

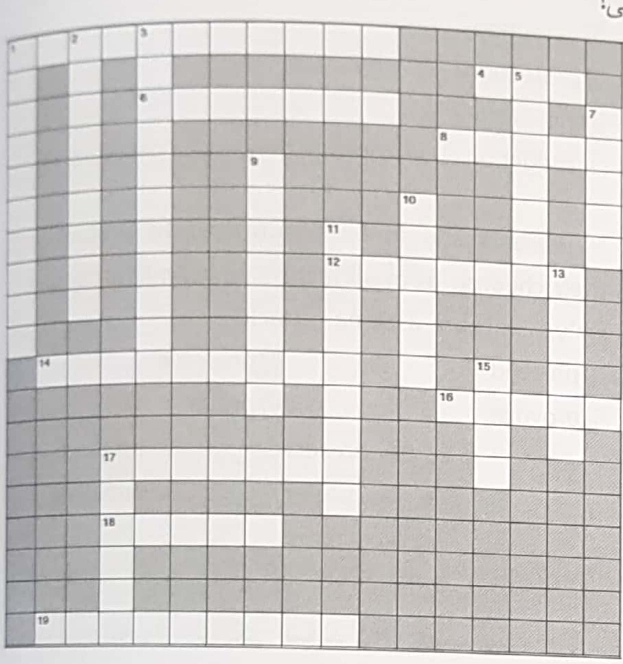
1. **What in meant by the sentence below:**
"... The reasons for the increase are likely to be systemic rather that confined to the lungs."
A) The reason is probably a systematic one
B) The reason may be related to the lungs
C) The reason is probably limited to the lungs
D) The reason may be both systematic and related to the lungs

2. **According to the text ....**
A) Rich nations have the largest number of asthmatics.
B) Poor nations have the largest number of asthmatics.
C) In developing countries, the number of asthmatics is decreasing.
D) Asthma seems to be related to urbanization.

3. **The word "harbor" in the text means ....**
A) Show
B) Indicate
C) Have
D) Shelter

Answers: 1. A / 2. D / 3. C

اینم یه بازی از این مبحث که هم دوره لغت واست باشه و هم استراحت کنی!



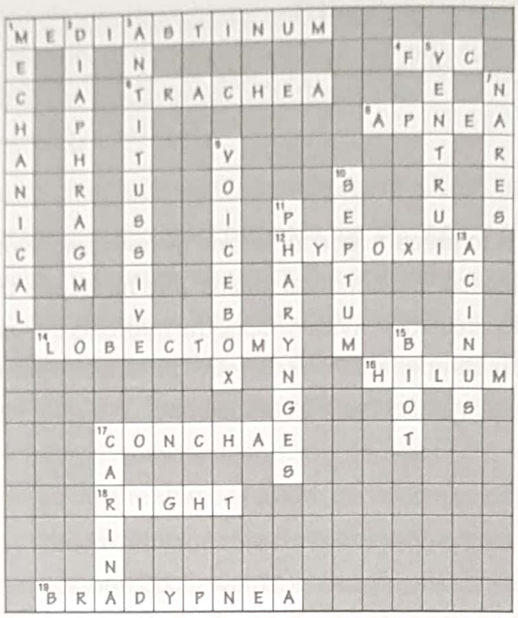
Across

1. Space between the lungs
4. Acronym for volume of air that can be exhaled after maximum inspiration (Answer: FVC)
6. Another word for windpipe
8. Absence of breathing
12. Deficiency of O2 at a cellular level
14. Surgical excision of a lung lobe
16. Slit on the lungs' medial surface (شکافی که در سطح داخلی ریه هست، ناف ریه)
17. Bony structures that form the posterior walls of the nasal passages
18. The lung that's shorter, broader, and larger than the other
19. Unusually slow, regular respirations

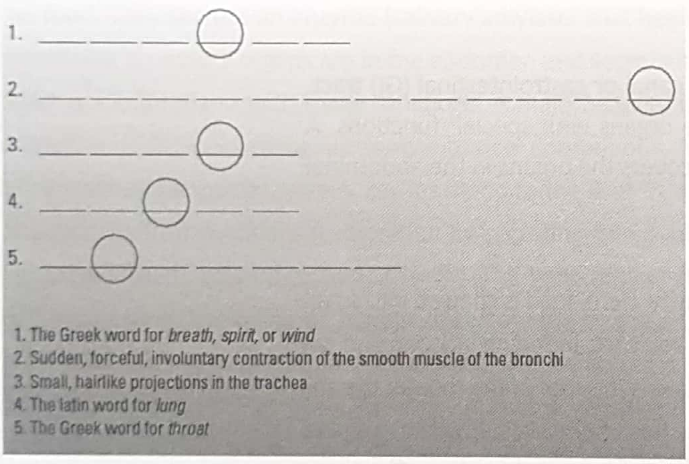
Down

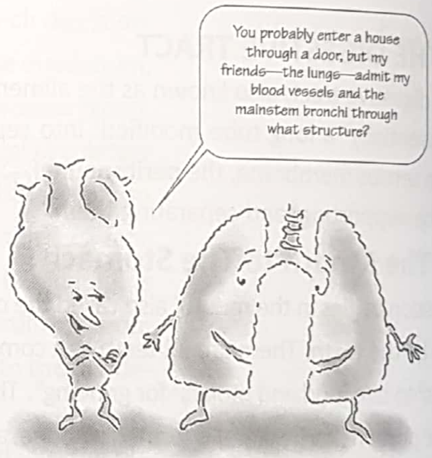
1. Type of ventilation that uses a positive-pressure system
2. Most important muscle for respiration
3. Drug type that acts to suppress cough
5. Eponym for a mask designed to deliver a high-flow, precise O2 mixture (Answer: VENTURI)
7. Another word for nostrils (سوراخ بینی)
9. Another word for larynx
10. The respiratory system structure that separates the nasal passages
11. Plural form of pharynx
13. Chief respiratory unit for gas exchange
15. Eponym for respirations characterized by irregular periods of apnea alternating with four or five breaths of the same depth (Answer: BIOT)
17. Another word for tracheal bifurcation

اینم خوبه یاد بگیری که Acronym به کلمات مخفف میگن مثلا FVC مخفف Forced vital capacity هست. و Eponym به کلماتی میگن که از اسم یه نفر گرفته شده و اسم یه نفر رو یه چیزی گذاشتن. پاسخ جدول هم اینه:



این بازی رو هم برو. باید کلمات رو بنویسی بعد حروف داخل دایره‌ها رو کنار هم بذاری تا به جواب سوال برسی!!





(شما احتمالا از طریق درب وارد خونه میشین، ولی دوستای من (ریه‌ها) اجازه میدن که عروق خونی و نایژه‌های اصلی از طریق چی وارد ریه بشن؟)

پاسخ:

1. Pneuma; 2. Bronchospasm; 3. Cilia; 4. Pulmo; 5. Pharynx

Answer to puzzle: Hilum

فصل ۱۰ دستگاه گوارش

Unit 10 Digestive System

رسیدیم به یه درس شیرین که اونم چیزی نیست جز..... دستگاه گوارش! کلی لغت اینجا یاد میگیری! برو ببینم چه میکنی!

◈ بررسی دستگاه گوارش از نظر ساختاری و عملکردی:

INTRODUCTION

The function of the digestive system is to prepare food for intake[1] by body cells. Nutrients must be broken down[2] by mechanical and chemical means[3] into molecules that are small enough to be absorbed[4] into circulation. Within[5] cells, the nutrients are used for energy and for rebuilding[6] vital[7] cell components. The digestive system also stores[8] undigested waste materials and then eliminates them from the body.

۱- برداشت / ۲- تجزیه شدن
۳- فرایندها / ۴- جذب شدن
۵- درون / ۶- بازسازی
۷- حیاتی / ۸- ذخیره کردن

DIGESTION

Digestion takes place[1] in the digestive tract proper, which extends from the **mouth** to the **anus. Peristalsis**[2], wave-like contractions[3] of the organ walls, moves food through the digestive tract and also moves undigested waste material out of the body. Also contributing[4] to digestion are several accessory[5] organs that release[6] secretions[7] into the digestive tract. **Enzymes** are needed throughout the digestive process. These compounds are organic catalysts[8] that speed the rate of food's chemical breakdown. The names of most enzymes can be recognized by the ending *-ase*.

۱- رخ دادن / ۲- حرکات دودی
۳- انقباضات / ۴- مشارکت داشتن
۵- فرعی / ۶- آزاد کردن
۷- ترشحات
۸- کاتالیزور

THE DIGESTIVE TRACT

The digestive tract, also known as the alimentary[1] canal or gastrointestinal (GI) tract, is essentially[2] a long tube modified[3] into separate organs with special[4] functions. A large serous membrane, the **peritoneum** (پریتونیوم), covers the organs in the abdominal cavity, supporting[5] and separating them.

۱- غذایی / ۲- در اصل
۳- تغییر یافتن / ۴- خاص
۵- حمایت کردن

• The Mouth to The Stomach

Digestion begins in the mouth, also called the oral cavity. Here, food is chewed into small bits[1] by the teeth. There are 32 teeth in a complete adult set, including incisors[2] and canines[3] to bite food and molars[4] for grinding[5]. The **palate** is the roof of the mouth; the anterior portion (hard palate) is formed by bone, and the posterior part (soft palate) is made of soft tissue. The fleshy[6] **uvula**, used in speech production, hangs[7] from the soft palate. In the process of chewing, or **mastication**[8], the tongue, lips, cheeks, and palate also help to break up food and mix it with **saliva**, a secretion that moistens[9] the food and begins starch[10] digestion. The salivary[11] glands[12] secrete saliva into the mouth and are considered to be accessory digestive organs.

۱- گازهای کوچک
۲- دندان پیشین / ۳- دندان نیش
۴- دندان آسیا / ۵- آسیاب کردن
۶- گوشتی / ۷- آویزان بودن
۸- جویدن / ۹- مرطوب کردن
۱۰- نشاسته / ۱۱- بزاقی
۱۲- غدد

• The Small Intestine

Food leaving the stomach enters the **duodenum**, the first portion of the **small intestine**. As the food continues through the **jejunum** and **ileum**, the small intestine's remaining[1] sections, digestion is completed. The digestive substances active in the small intestine include enzymes from the intestine itself and products from accessory organs that secrete into the duodenum.

۱- باقی‌مانده

The digested nutrients, including water, minerals, and vitamins, are absorbed into the circulation, aided[2] by small projections[3] in the intestinal lining called **villi**. Each villus[4] has blood capillaries to absorb nutrients into the bloodstream and lymphatic capillaries, or **lacteals**[5], to absorb small molecules of digested fats into the lymph. These fats join the blood when lymph flows into the bloodstream near the heart.

۲- کمک کردن
۳- برامدگی‌ها
۴- پرز
۵- شیری

• The Large Intestine

Any food that has not been digested, along with water and digestive juices[1], passes into the **large intestine**. This part of the digestive tract begins in the lower right region of the abdomen with a small pouch[2], the **cecum**, to which the **appendix**[3] pouch is attached (The appendix does not aid in digestion, but contains lymphatic tissue and may function in immunity). The large intestine continues as the **colon**, a name that is often used alone to mean the large intestine, because the colon constitutes[4] such a large portion of that organ. The colon travels upward along the right side of the abdomen as the ascending colon, crosses below the stomach as the transverse colon, and then continues down the left side of the abdomen as the descending colon. As food is pushed through the colon, water is reabsorbed, and stool or **feces**[5] is formed[6]. This waste material passes into the S-shaped **sigmoid colon** and is stored in the **rectum** until eliminated[7] through the anus.

۱- شیره گوارشی
۲- بن‌بست، کیسه
۳- آپاندیس
۴- تشکیل دادن
۵- مدفوع
۶- تشکیل شدن
۷- حذف کردن

■ THE ACCESSORY ORGANS

The salivary glands, which secrete into the mouth, are the first accessory organs to act[1] on food. They secrete an enzyme (salivary amylase) that begins starch digestion. The remaining accessory organs are in the abdomen and secrete into the duodenum. The **liver** is a large gland with many functions. A major activity is to process blood, removing toxins and converting nutrients into new compounds. A special circulatory pathway, the **hepatic portal system**, carries blood to the liver from the other abdominal organs. The liver functions in digestion by secreting **bile**, which emulsifies[2] fats, that is, breaks them down into smaller units. The **gallbladder**[3] stores bile until it is needed in digestion. The common hepatic duct from the liver and the cystic duct from the gallbladder merge to form the **common bile duct**, which empties into the duodenum.

The **pancreas** produces a mixture of digestive enzymes that is delivered into the duodenum through the pancreatic duct. It also secretes large amounts of bicarbonate, which neutralizes[4] the strong stomach acid.

۱- عمل کردن، فعالیت کردن
۲- امولسیون کردن
۳- کیسه صفرا
۴- خنثی کردن

این ریشه‌ها همگی مربوط به چیزای توی دهان هستن. یه بار ببینیمش. مثالا رو خوب یادبگیرا همه چیز در زندگی مهمه! حتی مثالای تو جدول!

Root or Suffix	Meaning	Example	Definition of Example
bucc/o	cheek (لپ)	buccoversion (بوکوورژن)	چرخش به سمت لپ
dent/o dent/i	teeth/tooth (دندان)	edentulous (ایدنتولوس)	بدون دندان

Root or Suffix	Meaning	Example	Definition of Example
odont/o	teeth/tooth (دندان)	periodontics (پریودونتیکس)	تخصصی از دندان پزشکی راجع به مطالعه و درمان بافت اطراف دندان
gingiv/o	gum (لثه)	gingivectomy (جینجیوکتومی)	برداشت بافت لثه
gloss/o	tongue (زبان)	glossoplegia (گلوسوپلژی)	فلج (plegia-) زبان
lingu/o	tongue (زبان)	orolingual (اورولینگوال)	مربوط به دهان و زبان
gnath/o	jaw (فک)	prognathous (پروگناتوس)	دارای فک برامده
labi/o	lip (لب)	labium (لابیوم)	لب یا ساختار شبیه به لب
or/o	mouth (دهان)	circumoral (سیرکامورال)	دور دهان
stoma stomat/o	mouth (دهان)	xerostomia (زروستومیا)	خشکی (-xero) دهان
palat/o	palate (کام)	palatine (پالاتاین)	مربوط به کام
sial/o	saliva/salivary gland (بزاق، غدد بزاقی)	sialogram (سیالوگرام)	تصویر رادیوگرافی از غدد بزاقی و مجاری آن
uvul/o	uvula (زبان کوچک)	uvulotome (اوولوتوم)	ابزاری (-tome) برای برش در زبان کوچک

اینا هم ریشه‌های مربوط به سایر بخش‌های لوله گوارش به جز دهان هستش:

Root	Meaning	Example	Definition of Example
esophag/o	مری	esophageal (ازوفاژیال)	مربوط به مری
gastro/o	معده	gastroparesis (گاستروپارزی)	فلج نسبی (paresis) معده
pylor/o	پیلور	pyloroplasty (پیلوروپلاستی)	ترمیم پیلور
enter/o	روده	dysentery (دیس‌انتری)	بیماری عفونی روده

Root	Meaning	Example	Definition of Example
duoden/o	دئودنوم	duodenostomy (دئودنوستومی)	ایجاد یک منفذ در دئودنوم به کمک جراحی
jejun/o	ژژنوم	jejunectomy (ژژنکتومی)	برداشت ژژنوم
ile/o	ایلئوم	ileitis (ایلئاتیس)	التهاب ایلئوم
cec/o	سکوم	cecoptosis (سکوپتوزیس)	افتادگی سکوم
col/o, colon/o	کولون	coloclysis (کولوکلایسیس)	شست و شوی (irrigation) کولون (irrigation = clysis-)
sigmoid/o	کولون سیگموئید	sigmoidoscope (سیگموئیدوسکوپ)	یک اندوسکوپ جهت معاینه سیگموئید
rect/o	رکتوم	rectocele (رکتوسل)	هرنی (فتق) رکتوم
proct/o	رکتوم	proctopexy (پروکتوپکسی)	فیکساسیون (تثبیت) رکتوم (pexy- = فیکساسیون)
an/o	رکتوم	perianal (پری‌آنال)	دور مقعد

یه سری ریشه‌های راجع به ارگان‌ها و اعضای فرعی دستگاه گوارش یاد بگیر:

Root	Meaning	Example	Definition of Example
hepat/o	کبد	hepatocyte (هپاتوسیت)	یک سلول کبد
bili	صفرا	biliary (بیلیاری)	مربوط به صفرا و مجاری صفراوی
chol/e, chol/o	صفرا	cholestasis (کلستازیس)	توقف جریان صفرا
cholecyst/o	کیسه صفرا	cholecystogram (کله‌سیستوگرام)	تصویر رادیوگرافی از کیسه صفرا
cholangi/o	مجرای صفراوی	cholangioma (کلانژیوما)	سرطان مجاری صفراوی
choledoch/o	مجرای صفراوی مشترک	choledochal (کله‌دوکال)	مربوط به مجرای صفراوی مشترک
pancreat/o	پانکراس	pancreatotropic (پانکرئاتوتروپیک)	اثرگذار و فعال در پانکراس

یه تمرین زیبای دیگه...

1. micrognathia is excessive smallness of the _____
2. stomatoplasty is any plastic repair of the ____
3. hemiglossal is pertaining to one half of the ____
4. sialolith is a stone formed in a(n) ______
5. Downward displacement of uvula
6. persistent indigestion as asymptom of stomach cancer
7. surgical fixation of the colon
8. enlargement of liver
9. inflammation of a bile duct
10. wave-like muscular contraction

Answer: 1. jaw / 2. Plastic repair of mouth / 3. Tongue / 4. Salivary gland / 5. uvuloptosis
6. dyspepsia / 7. Colopexy / 8. Hepatomegaly / 9. Cholangitis / 10. peristalsis

سخت که نبود؟ قشنگ رو این مبحث مسلط شدی هرچی بهت بدن دیگه میتونی جواب بدی.

1. Glossopyrosis is the condition in which there is a/an .... sensation on the tongue caused by spicy foods/etc. قطب اصفهان - شهریور ۹۷

A) allergic B) burning
C) shivering D) swelling

2. Glossorrhaphy is the............. قطب تهران و اصفهان - اسفند ۹۶

A) radiography of the renal pelvis
B) surgical fixation of the colon
C) suturing of wound in the tongue
D) softening of the glomerulus

3. A surgical procedure in which abnormal cleft in upper jaw is reconstructed is .... قطب اصفهان - اسفند ۹۵

A) cheiloschesis B) labiodynia
C) palatorrhaphy D) Gnathoplasty

4. Stomatitis a common side effect of systemic chemotherapy, is an inflammatory condition of the........... قطب تبریز - شهریور ۹۷

A) Mouth B) Stomach
C) Teeth and hair D) Abdomen

5. Sialolithiasis refers to the formation of stones in the .... قطب کرمان - اسفند ۹۵

A) salivary glands
B) urinary bladder
C) lacrimal glands
D) gall bladder

6. To start endoscopy, the physician .... the endoscope into the esophagus. قطب اهواز - اسفند ۹۷

A) excised B) incised
C) introduced D) recuperated

(introduced: به کار گرفتن، ارائه کردن / recuperated: بهبود یافتن)

7. Proctopexy means surgical fixation of .... قطب تبریز - اسفند ۹۷

A) ileum
B) duodenum
C) jejunum
D) rectum

8. The gastric juices .... By the glands make swallowing easier. قطب مشهد - اسفند ۹۳

A) Conducted B) Released
C) Inactivated D) surrounded

9. Cholemesis is a medical condition means..... میان دوره کشوری - اردیبهشت ۹۶

A) vomiting of blood
B) vomiting of bile
C) spitting of blood
D) spitting of bile

10. Muscular wave- like movement to transport food through the digestive system is called .... هشت قطب مشترک - شهریور ۹۶

A) regurgitation
B) mastication
C) emulsification
D) peristalsis

Answers: 1. B / 2. C / 3. C / 4. A / 5. A / 6. C / 7. D / 8. B / 9. B / 10. D

◈ بررسی دستگاه گوارش از نظر بالینی:

DIGESTIVE TRACT

• Infection

A variety of organisms can infect the GI tract, from viruses and bacteria to protozoa[1] and worms. In the mouth, bacterial infection contributes to tooth decay or **caries[2]**. It may cause a mild gum[3] infection (gingivitis) or more extensive[4] involvement of the deeper tissues and bony support around the tooth (periodontitis). Infections of the stomach or intestine may produce short-lived upsets[5] with **gastroenteritis**, **nausea**, **diarrhea**, and **emesis** (vomiting[6]). Other infectious diseases of the GI tract, such as typhoid, cholera, and dysentery[7], are more serious, even fatal[8].

Appendicitis results from infection of the appendix, often secondary to its obstruction. Surgery is necessary to avoid rupture and **peritonitis**[9], infection of the peritoneal cavity.

۱- تک یاخته
۲- پوسیدگی
۳- لثه / ۴- وسیع
۵- ناراحتی‌های کوتاه مدت
۶- استفراغ
۷- عفونت روده همراه با اسهال خونی
۸- کشنده
۹- التهاب صفاق

• Ulcers

An ulcer[1] is a lesion[2] of the skin or a mucous membrane marked by inflammation and tissue damage. Ulcers caused by the damaging action of gastric juices, also called peptic juices, on the lining of the GI tract are termed **peptic ulcers**. Most peptic ulcers appear in the first portion of the duodenum. The origins of such ulcers are not completely known, although infection with a bacterium, *Helicobacter pylori*, has been identified as a major cause. Heredity and stress may be factors, as well as chronic inflammation and exposure to damaging drugs, such as aspirin and other NSAIDs, or to irritants in food and drink.

Current ulcer treatment includes the administration of antibiotics to eliminate *H. pylori* infection and use of drugs that inhibit[3] gastric acid secretion. Ulcers may lead to hemorrhage[4] or to perforation of the digestive tract wall.

Ulcers can be diagnosed by **endoscopy** and by radiographic study of the GI tract using a contrast[5] medium, usually barium sulfate. A **barium study** can reveal a variety of GI disorders in addition to ulcers, including tumors and obstructions. A barium swallow is used for the study of the pharynx and esophagus; an upper GI series examines the esophagus, stomach, and small intestine.

۱- زخم
۲- ضایعه
۳- مهار کردن
۴- خونریزی
۵- ماده حاجب

• Cancer

Cancer of the mouth generally involves the lips or tongue. Smoking is a major risk factor in these cases. **Leukoplakia**, white patches on mucous membranes, often results from smoking or other irritants and is an early sign of cancer in up to 25 percent of cases. The most common sites for GI tract cancer are the colon and rectum. Heredity is a factor, as is chronic inflammation of the colon (colitis). **Polyps** (growths) in the intestine often become cancerous and should be removed. Polyps can be identified and even removed by endoscopy.

One sign of colorectal cancer is bleeding[1] into the intestine, which can be detected by testing the stool for blood. Because this blood may be present in very small amounts[2], it is described as **occult** ("hidden[3]") **blood**.

Examiners can observe the intestine's interior[4] with various endoscopes named for the specific area in which they are used, such as proctoscope (rectum), sigmoidoscope (sigmoid colon), and colonoscope (colon).

۱- خونریزی
۲- مقدار
۳- پنهان
۴- سطح داخل

In some cases of cancer, and for other reasons as well, it may be necessary to surgically remove a portion of the GI tract and create[1] a **stoma** (opening[2]) on the abdominal wall for elimination of waste. Such **ostomy** surgery is named for the organ involved, such as ileostomy (ileum) or colostomy (colon). When an **anastomosis** (connection[3]) is formed between two organs of the tract, both organs are included in naming[4], such as gastroduodenostomy (stomach and duodenum) or coloproctostomy (colon and rectum).

۱- ایجاد کردن
۲- منفذ
۳- اتصال
۴- نامگذاری

• Obstructions

A hernia[1] is the protrusion[2] of an organ through an abnormal opening. The most common type is an inguinal hernia. In a **hiatal hernia**, part of the stomach moves upward into the chest cavity through the space (hiatus[3]) in the diaphragm through which the esophagus passes. Often this condition produces no symptoms, but it may result in chest pain, **dysphagia** (difficulty in swallowing), or reflux (backflow[4]) of stomach contents into the esophagus.

In **pyloric stenosis**, the opening between the stomach and small intestine is too narrow. A sign of pyloric stenosis is projectile[5] vomiting. Surgery may be needed to correct it.

Other types of obstruction include **intussusception**[6] slipping[7] of an intestinal segment into a part below it; **volvulus**, twisting[8] of the intestine; and **ileus**, intestinal obstruction often caused by lack of peristalsis.

Hemorrhoids[9] are varicose[10] veins in the rectum associated with pain, bleeding, and, in some cases, rectal prolapse.

۱- هرنی، فتق
۲- بیرون زدگی
۳- دهانه
۴- جریان برعکس، برگشتن
۵- پرتابی
۶- درهم‌رفتگی
۷- لیز خوردن
۸- پیچ خوردن
۹- بواسیر
۱۰- واریسی

• Gastroesophageal Reflux Disease

Gastroesophageal reflux disease (GERD) refers to reflux of gastric juices into the esophagus due to weakness at the gastroesophageal junction[1], specifically the LES (lower esophageal sphincter). These acidic secretions irritate the lining of the esophagus and even the throat and mouth if propelled[2] upward by **regurgitation**[3]. A GERD symptom commonly known as **heartburn**[4], an upward-radiating[5] burning sensation behind the sternum, does not involve the heart, but is experienced in the area near the heart.

GERD symptoms are more likely to occur[6] when there is increased pressure in the stomach, such as after meals[7] when the stomach is full, when one is lying[8] or bending down[9], and with obesity[10] and pregnancy. Hiatal hernia can also lead to GERD.

Persistent[11] reflux esophagitis may cause injury to the esophageal lining leading to **Barrett syndrome** or *Barrett esophagus*. In this condition, the esophageal mucosa is gradually replaced with epithelium resembling[12] that of the stomach or intestines. Barrett esophagus frequently has no early symptoms, but possible complications include esophageal spasms, formation of scar tissue, esophageal strictures[13], and increased risk of cancer.

۱- پیوستگاه
۲- حرکت کردن، پیش راندن
۳- ریگورژیتاسیون (بازگشت غذا)
۴- سوزش سردل / ۵- منتشر به بالا
۶- رخ دادن / ۷- غذاها، وعده‌ها
۸- دراز کشیدن
۹- خم شدن به پایین
۱۰- چاقی
۱۱- مداوم
۱۲- شبیه بودن به
۱۳- تنگی مری

• Inflammatory Intestinal Disease

Two similar diseases are included under the heading[1] of inflammatory bowel disease (IBD):

- **Crohn disease** is a chronic inflammation of the intestinal wall, usually in the ileum and colon, causing pain, diarrhea[2], abscess, and often formation of an abnormal passageway, or **fistula**.
- **Ulcerative colitis** involves a continuous inflammation of the colon's lining that begins in the rectum and extends proximally.

Celiac disease is characterized by the inability to absorb foods containing gluten, a protein found in wheat[3] and some other grains[4]. It affects the upper part of the small intestine and originates with an excess immune response to gluten. Mucosal inflammation diminishes the intestinal villi and interferes[5] with absorption. Celiac disease is treated with a gluten-free diet[6].

۱- تحت عنوان
۲- اسهال
۳- گندم
۴- غلات
۵- ایجاد تداخل
۶- رژیم فاقد گلوتن

Diverticulitis most commonly affects the colon. Diverticula are small pouches in the intestinal wall that commonly appear with age. The presence of these pouches is termed **diverticulosis**, which has been attributed[7] to a diet low in fiber. Collection of waste and bacteria in these sacs leads to diverticulitis, which is accompanied[8] by pain and sometimes bleeding.

۷- نسبت دادن
۸- همراه با

■ ACCESSORY ORGANS

• Hepatitis

In the United States and other industrialized[1] countries, **hepatitis** is most often caused by viral infection. More than five types of hepatitis viruses have now been identified. Vaccines are available[2] for hepatitis A and hepatitis B. The name *hepatitis* simply means "inflammation of the liver," but this disease also causes necrosis (death) of liver cells. Other infections as well as drugs and toxins may also cause hepatitis. Liver function tests performed[3] on blood serum are important in diagnosis.

Jaundice, or **icterus**[4], is a symptom of hepatitis and other diseases of the liver and biliary system. It appears as yellowness of the skin, whites of the eyes, and mucous membranes due to[5] the presence of bile pigments[6], mainly **bilirubin**, in the blood.

۱- صنعتی
۲- در دسترس بودن
۳- انجام دادن
۴- یرقان
۵- به دلیل
۶- رنگدانه

• Cirrhosis

Cirrhosis is a chronic liver disease characterized by **hepatomegaly**, edema, **ascites** (fluid in the abdomen), and jaundice. Disease progression[1] leads to internal bleeding and brain damage caused by changes in the blood's composition. One complication of cirrhosis is **portal hypertension**, increased pressure in the hepatic portal system, the vessels that carry blood from the other abdominal organs to the liver. Portal hypertension causes **splenomegaly** and the formation of varices (varicose veins) in the distal esophagus with possible hemorrhage. The main cause of cirrhosis is the excess consumption[2] of alcohol.

۱- پیشرفت
۲- مصرف

• Gallstones

Cholelithiasis refers to the presence of stones in the gallbladder or bile ducts, which is usually associated with **cholecystitis**, inflammation of the gallbladder. Cholelithiasis is characterized by **biliary colic** (pain) in the right upper quadrant[1] (RUQ), nausea[2], and vomiting[3]. Most gallstones are composed of cholesterol, an ingredient[4] of bile. They form more commonly in women than in men and are promoted[5] by conditions that increase estrogen, as this hormone raises the cholesterol level in bile. These predisposing conditions include pregnancy, use of oral contraceptives[6], and obesity. Oddly[7], the rapid weight loss that follows stomach reduction surgery to treat morbid obesity commonly leads to gallstones because of changes in bile production and cholesterol precipitation[8] in the bile. Drugs may dissolve gallstones, but often the cure is removal of the gallbladder in a **cholecystectomy**.

۱- ربع
۲- تهوع
۳- استفراغ
۴- ماده سازنده
۵- تقویت شدن
۶- ضدبارداری
۷- به طرز عجیبی
۸- رسوب

• Pancreatitis

Pancreatitis, or inflammation of the pancreas, may result from alcohol abuse[1], drug toxicity, bile obstruction, infections, and other causes. Blood tests in acute pancreatitis show increased levels of the enzymes amylase and lipase. Glucose and bilirubin levels may also be elevated. Often the disease subsides[2] with only symptomatic treatment.

۱- سوء مصرف
۲- فروکش کردن

از این به هم وصل کنیدهای همیشگی هم یادت نره حل کنی!

__ 1. choledochal	A. a type of liver disease
__ 2. cholelithotripsy	B. pertaining to the common bile duct
__ 3. cholangiectasis	C. crushing of a biliary calculus
__ 4. leukoplakia	D. dilatation of a bile duct
__ 5. cirrhosis	E. white patches on a mucous membrane

Answer: 1. B / 2. C / 3. D / 4. E / 5. A

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. Patients are advised to avoid caffeine, smoking, and alcohol which .... the symptoms of gastric ulcers.

A) intensify B) alleviate
C) obstruct D) contain

کلاسیک کشوری - شهریور ۹۸

2. Characterized by right upper quadrant pain and colicky in nature, ... is often associated with fatty meals or diets, but this is not required.

A) urocystolith B) Cholelithiasis
C) Ulcerative colitis D) ileocolostomy

ریفرم قطب کرمان - شهریور ۹۸

3. The patient referred to the physician with excessive vomiting; the physician diagnosed his condition as ....

A) hyperemesis B) uniemesis
C) galactorhea D) polyuria

شهید بهشتی - شهریور ۹۷

4. Abnormal accumulation of serous fluid in the spaces between tissues and organs in the cavity of the abdomen and free fluid in the peritoneal cavity:

A) ascites B) cachexia
C) edematous D) myasthenia

ریفرم قطب زنجان - شهریور ۹۸

5. The white patches on mucous membranes marked by inflammation and tissue damage are called ....

A) leukopenia B) leukemia
C) leukocytosis D) leukoplakia

ریفرم قطب تبریز - شهریور ۹۸

6. A backward flow, such as the backflow of undigested food, is known as ....

A) obstination B) ligation
C) recuperation D) regurgitation

کلاسیک قطب تبریز - شهریور ۹۸

7. 70 year old male is diagnosed with slipping of one intestinal part into another part below it. What is the diagnostic term?

A) Intussusceptions B) Peristalsis
C) Polyp D) Peritonitis

قطب همدان - اسفند ۹۷

8. The medical team recommended .... as the best treatment for the patient to remove the gallbladder surgically.

A) cholecystotomy B) cholecystectomy
C) cystotomy D) cystectomy

میان دوره کشوری - آذر ۹۸

9. Diverticula are:

A) Small pouches in the wall of the colon.
B) Communications between two organs.
C) Ducts in the liver.
D) Polyps in the intestine.

قطب اهواز - شهریور ۹۳

10. All of the following conditions can cause GI obstruction except for:

A) Volvulus
B) Cirrhosis
C) Intussusception
D) Pyloric stenosis

قطب مشهد - اسفند ۹۴

Answers: 1. A / 2. B / 3. A / 4. A / 5. D / 6. D / 7. A / 8. B / 9. A / 10. B

اینم یه متن گوارشی از «پزشکی اسفند ۹۴ - قطب اهواز» با موضوع بیماری کرون. بزن ببین چطوریه!

A.E., a 19- YO college student. Was diagnosed at the age of 13 with Crohn disease, a chronic inflammatory disease that can affect the entire[1] gastrointestinal tract from mouth to anus. A.E.'s disease is limited to his large bowel. During a nine- month period of disease exacerbation characterized by severe cramping and bloody stools, he took oral corticosteroids (prednisone) to reduce the inflammatory response. He experienced many of the drug's side effects, but has been in remission[2] for four years. Currently, A.E.'s condition is managed on drugs that reduce inflammation by suppressing the immune response. He takes Pentasa (mesalamine) 250mg 4 caps po[3] bid[4] Pentasa is of the 5- ASA (acetylsalicylic acid or aspirin) group of anti- inflammatory agents, which work topically on the inner surface of the bowel. It has an enteric coating[5], which dissolves in the bowel environment. He also takes 6- mercaptopurine (purinethol) 75 mg po daily and a therapeutic vitamin with breakfast. A.E. may take acetaminophen for pain but must avoid NSAIDs, which will irritate the intestinal mucosa (inner lining) and cause a flare up of the disease.

۱- تمام

۲- بهبودی

۳- خوراکی، دهانی (per os)

۴- دو بار در روز

۵- پوشش

1. A.E. takes several drugs to prevent or act against his inflammatory response. These agents are described as:

A) contra-inflammatory
B) counter-inflammatory
C) anti-inflammatory
D) pro-inflammatory

2. A.E. presented with several untoward results or risks from the corticosteroid therapy. These sequelae are called:

A) contraindications
B) side effects
C) antagonistic effects
D) exacerbations

3. A.E. takes four 250- mg capsules of Pentasa po bid. How many capsules does he take in one day?

A) 2
B) 1
C) 4
D) 8

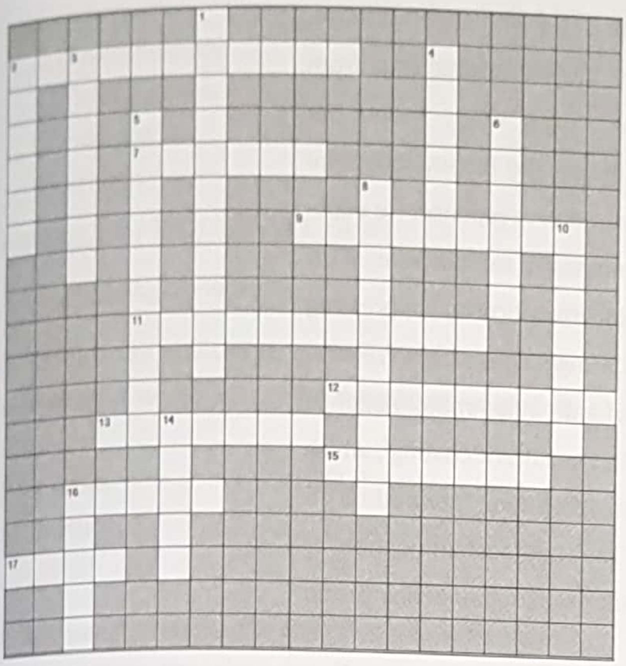
4. A.E. must avoid NSAIDs because, in cases of inflammatory bowel disease, these drugs are:

A) contraindicated
B) indicated
C) complementary
D) synergistic

(contraindicated: منع مصرف)

Answers: 1. C / 2. B / 3. D / 4. A

اینم یه جدول از این مبحث زیبا:



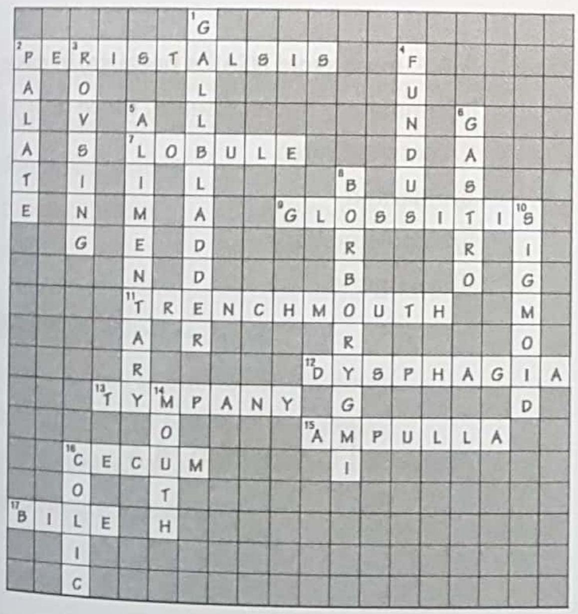
Across

2. Rhythmic contraction and relaxation of smooth muscle in the alimentary canal
7. Liver's functional unit
9. Inflammation of the tongue
11. Another name for Vincent's stomatitis (Ans: Trench Mouth)
12. Difficult or painful swallowing
13. Clear, hollow, drumlike sound heard on abdominal palpation
15. Greek word that means little jug (Ans: Ampulla)
16. Saclike structure that makes up the first few inches of the large intestine
17. Yellow-green liquid that breaks down fats and neutralizes gastric secretions

Down

1. Pear-shaped organ nestled under the liver
2. Roof of the mouth
3. Eponym for diagnostic sign of appendicitis (Ans: Rovsing)
4. Enlarged portion of the stomach above and to the left of the esophageal opening
5. Canal also called the GI tract
6. Root from Greek that means stomach
8. Growling sound in the stomach that indicates hunger (Ans: Borborygmi)
10. Part of the colon named after a Greek letter
14. Also called the buccal cavity
16. Acute abdominal pain

پاسخ جدول هم اینه:



دستگاه ادراری
Urinary System

فصل ۱۱
Unit 11

تو این درس یه سری تست و لغت از مبحث ادراری یاد میگیریم. زیاد سخت نیست برو میبینی.

بررسی دستگاه ادراری از نظر ساختاری و عملکردی:

INTRODUCTION

The urinary system excretes[1] metabolic waste. In forming and eliminating urine, it also regulates the composition, volume, and acid–base balance (pH) of body fluids. In several ways, kidney activity affects the circulation. The urinary system is thus of critical[2] importance in maintaining homeostasis, the state of internal balance. The urinary system consists of:

- Two kidneys, the organs that form urine
- Two ureters[3], which transport urine from the kidneys to the bladder
- The urinary bladder, which stores and eliminates urine The urethra[4], which carries urine out of the body

۱- دفع
۲- مهم و حیاتی
۳- میزنای، حالب
۴- پیشابراه

THE KIDNEYS

The kidneys are the organs that form **urine**[1] from substances filtered out of the blood. In addition to metabolic wastes, urine contains water and ions, so its formation is important in regulating the blood's volume and composition. In addition, the kidneys produce two substances that act on the circulatory system:

- - **Erythropoietin (EPO)**, a hormone that stimulates red blood cell production in the bone marrow.
- - **Renin**, an enzyme that functions to raise blood pressure. It activates a blood component called **angiotensin**, which causes constriction of the blood vessels. The drugs known as ACE inhibitors (angiotensin-converting enzyme inhibitors) lower blood pressure by interfering[2] with the production of angiotensin.

۱- ادرار
۲- مداخله کردن

• Kidney Location and Structure

The **kidneys** are located behind the peritoneum in the lumbar region. On the top of each kidney rests[1] an adrenal gland. The kidney is encased[2] in a capsule of fibrous connective tissue overlaid[3] with fat. An outermost layer of connective tissue supports the kidney and anchors[4] it to the body wall.

If you look inside the kidney, you will see that it has an outer region, the **renal cortex**[5], and an inner region, the **renal medulla**. The medulla is divided into triangular[6] sections, the **renal pyramids**[7]. These pyramids have a lined appearance[8] because they are made up of the loops and collecting tubules of the **nephrons**, the kidney's functional units. Each collecting tubule empties into a urine-collecting area called a **calyx** (from the Latin word meaning "cup"). Several of the smaller minor calices merge to form a major calyx. The major calices then unite[9] to form the **renal pelvis**, the upper funnel-shaped portion of the **ureter**.

۱- قرار داشتن
۲- محصور شدن
۳- پوشیده شدن
۴- متصل کردن
۵- قشر
۶- مثلثی
۷- هرم
۸- ظاهر خط خطی
۹- متحد کردن

• The Nephron

The tiny working units of the kidneys are the nephrons. Each of these microscopic structures is basically a single tubule coiled[1] and folded[2] into various shapes. The tubule begins with a cup-shaped **glomerular** (Bowman) **capsule**, which is part of the nephron's blood-filtering device. The tubule then folds into the proximal[3] tubule, straightens[4] out to form the nephron loop[5] (loop of Henle), coils again into the distal[6] tubule, and then finally straightens out to form a collecting[7] duct.

۱- پیچیده
۲- تا خورده
۳- نزدیک
۴- صاف شدن
۵- حلقه
۶- دور
۷- جمع کننده

• Blood Supply to the Kidney

Blood enters the kidney through a renal artery, a short branch of the abdominal aorta. This vessel subdivides into smaller vessels as it branches throughout the kidney tissue, until finally blood is brought into the glomerular capsule and circulated through a cluster of capillaries, called a **glomerulus**, within the capsule.

Blood leaves the kidney by a series of vessels that finally merge[8] to form the renal vein, which empties into the inferior vena cava.

۸- ادغام شدن

■ URINE FORMATION

As blood flows through the glomerulus, blood pressure forces materials through the glomerular wall and through the wall of the glomerular capsule into the nephron. The fluid that enters the nephron, the **glomerular filtrate**, consists mainly of water, electrolytes, soluble wastes, nutrients, and toxins. The main waste material is **urea**[1], the nitrogenous (nitrogen-containing) byproduct of protein metabolism. The filtrate should not contain any cells or proteins, such as albumin.

The waste material and the toxins must be eliminated, but most of the water, electrolytes, and nutrients must be returned to the blood, or we would rapidly starve[2] and dehydrate. This return process, termed **tubular reabsorption**, occurs[3] through the peritubular capillaries that surround the nephron.

As the filtrate flows through the nephron, other processes further regulate its composition and pH. The filtrate's concentration is also adjusted under the effects of a pituitary hormone. **Antidiuretic hormone (ADH)** promotes reabsorption of water, thus concentrating the filtrate. The final filtrate, now called urine, flows into the collecting ducts to be eliminated. A **diuretic** is a substance that promotes[4] increased urinary output or **diuresis**. Diuretic drugs are used in treating hypertension and heart failure to decrease fluid volume and reduce the heart's workload.

۱- اوره
۲- گرسنگی کشیدن
۳- رخ دادن
۴- تقویت کردن

• Transport and Removal of Urine

Urine is drained from the renal pelvis and carried by the left and right ureters to the **urinary bladder**, where it is stored. The bladder is located posterior to the pubic bone and below the peritoneum. As the bladder fills, it expands upward from a stable triangle at its base. This triangle, the **trigone**, is marked by the ureteral openings and the urethral opening below. The trigone's stability[1] prevents urine from refluxing into the ureters.

Fullness stimulates a reflex contraction of the bladder muscle and expulsion[2] of urine through the **urethra**. The female urethra is short (4 cm [1.5 in]) and carries only urine. The male urethra is longer (20 cm [8 in]) and carries both urine and semen[3].

The voiding[4] (release) of urine, called **urination** or more technically, **micturition**, is regulated by two sphincters (circular muscles) that surround the urethra. The superior muscle, the internal urethral sphincter, is around the entrance to the urethra and functions involuntarily; the inferior muscle, the external urethral sphincter, is under conscious control. An inability to retain[5] urine is termed *urinary incontinence*[6].

۱- پایداری
۲- خروج یا دفع
۳- مایع منی
۴- بیرون ریختن
۵- نگه داشتن
۶- بی‌اختیاری ادرار

اینا یه سری ریشه مربوط به کلیه از دستگاه ادراری؛

Root	Meaning	Example	Definition of Example
ren/o	کلیه	Suprarenal (سوپرارنال)	بالای کلیه
nephr/o	کلیه	Nephrosis (نفروزیس)	هر بیماری غیرالتهابی کلیه
glomerul/o	گلومرول	Juxtaglomerular (جاکستاگلومرولار)	نزدیک گلومرول‌ها
pyel/o	لگنچه کلیوی	Pyelectasis (پایلکتیسیس)	اتساع لگنچه کلیه‌ها
cali/o, calic/o	کالیس	Caliceal (کالیسیال)	مربوط به کالیس کلیوی (calyceal هم نوشته می‌شود)

اینا هم یه سری ریشه از سایر بخش‌های دستگاه ادراری به جز کلیه:

Root	Meaning	Example	Definition of Example
ur/o	ادرار، دستگاه ادراری	Urosepsis (اوروسپسیس)	عفونت منتشر با منشا مجرای ادراری
urin/o	ادرار	Nocturia (ناکچوریا)	ادرارکردن در شب
ureter/o	میزنای	Ureterostenosis (یورترو استنوزیس)	تنگ شدن میزنای
cyst/o	مثانه (bladder)	Cystocele (سیستوسل)	هرنی مثانه
vesic/o	مثانه	Intravesical (اینتراوزیکال)	درون مثانه
urether/o	پیشابراه	Urethrotome (یورتروتوم)	وسیله ای برای برش پیشابراه

خب یه تمرین مهم دیگه که در آزمون های اخیر مورد توجه طراحان بوده...

1. The condition described as bed-wetting
2. Painful urination
3. The passage of small amounts of urine
4. Blood in urination
5. Involuntary passing of urine

Answer: 1.Nocturia/2.Dysuria/3.Oliguria/4.Hematuria/5.Enuresis

ببینم این تستا رو چه میکنی:

1. The patient was strongly advised to go under nephrolithotomy or .... by surgical procedure. (کلاسیک مشهد - شهریور ۹۸)
A) hardening of a stone in the kidney
B) removal of the urinary bladder
C) excision of the kidney and stones
D) incision to remove a renal calculus

2. The correction of certain disease may be possible if early treatment is provided. It should be however noted that certain chronic diseases such as renal failure are .... (قطب بهشتی - اسفند ۹۸)
A) responsive
B) compulsory
C) irreversible
D) unintentional

3. Renal calculi are: (قطب آزاد - اسفند ۹۴)
A) bile obstructions
B) kidney malfunction
C) kidney stones
D) gallstones

4. .... is the procedure in which stones are crushed. (ریفرم آزاد - شهریور ۹۸)
A) Lithotomy
B) Nephrolithiasis
C) Lithotrite
D) Lithotripsy

5. A cystoscope is an instrument used most commonly by which of the following specialists? (کلاسیک قطب مشهد - شهریور ۹۸)
A) Endocrinologist
B) Gastroenterologist
C) Dermatologist
D) Urologist

6. Distention of the ureter is referred to as .... (قطب شیراز - اسفند ۹۴)
A) ureterolithiasis
B) ureterectasis
C) ureteropyosis
D) urethratresia

7. The patient complained about excessive and frequent urination after going to bed.His condition was diagnosed as .... (پزشکی کشوری - اسفند ۹۹)
A) Oliguria
B) Anuria
C) Nyctalgia
D) Nocturia

Answers: 1. D / 2. C / 3. C / 4. D / 5. D / 6. B / 7. D

◈ بررسی دستگاه ادراری از نظر بالینی:

■ INFECTIONS

Organisms that infect the urinary tract generally enter through the urethra and ascend[1] toward the bladder, producing **cystitis**. Untreated, the infection can ascend even further into the urinary tract. The infecting organisms are usually colon bacteria carried in feces, particularly *Escherichia coli*. Although urinary tract infections (UTIs) do occur in men, they appear more commonly in women because the female urethra is shorter than the male urethra and its opening is closer to the anus. Poor toilet habits and **urinary stasis**[2] are contributing factors. In hospitals, UTIs may result from procedures involving the urinary system, especially **catheterization**, in which a tube is inserted into the bladder to withdraw urine. Less frequently, UTIs originate in the blood and descend through the urinary system.

An infection that involves the kidney and renal pelvis is termed **pyelonephritis**. As in cystitis, signs of this condition include **dysuria**[3], painful or difficult urination, and the presence of bacteria and pus in the urine, **bacteriuria** and **pyuria**, respectively.

Urethritis is inflammation of the urethra, generally associated with sexually transmitted[4] infections such as gonorrhea[5] and chlamydial infections.

۱- بالا رفتن
۲- توقف ادرار
۳- سوزش ادرار
۴- منتقله
۵- سوزاک

GLOMERULONEPHRITIS

Although[1] the name simply means inflammation of the glomeruli and kidney, **glomerulonephritis** is a specific disorder that follows an immunologic reaction. It is usually a response to infection in another system, commonly a streptococcal infection of the respiratory tract or a skin infection. It may also accompany[2] autoimmune diseases such as lupus erythematous. The symptoms are hypertension, edema, and **oliguria[3]**, the passage of small amounts of urine.

This urine is highly concentrated. Because of damage to kidney tissue, blood and proteins escape into the nephrons, causing **hematuria[4]**, blood in the urine, and **proteinuria**, protein in the urine. Blood cells may also form into small molds of the kidney tubule, called **casts**, which can be found in the urine. Most patients fully recover from glomerulonephritis, but in some cases, especially among the elderly, the disorder may lead to chronic renal failure (CRF) or end-stage renal disease (ESRD). In such cases, urea and other nitrogenous compounds accumulate in the blood, a condition termed **uremia**. These compounds affect the central nervous system, causing irritability[5], loss of appetite[6], stupor, and other symptoms. There is also electrolyte imbalance and **acidosis.**

۱- اگرچه
۲- همراهی با
۳- کاهش میزان ادرار
۴- خون در ادرار
۵- بی‌قراری
۶- کاهش اشتها

NEPHROTIC SYNDROME

Glomerulonephritis is one cause of **nephrotic syndrome**, a disease in which the glomeruli become overly permeable[1] and allow the loss of proteins. Other possible causes of nephrotic syndrome are renal vein thrombosis, diabetes, systemic lupus erythematosus, toxins, or any other condition that damages the glomeruli.

Nephrotic syndrome is marked by proteinuria and **hypoproteinemia**, low blood protein. The low plasma protein level affects capillary exchange and results in edema. There is also an increase in blood lipids, as the liver compensates[2] for lost protein by releasing lipoproteins.

۱- نفوذ پذیر
۲- جبران کردن

ACUTE RENAL FAILURE

Injury, shock, exposure to toxins, infections, and other renal disorders may cause damage to the nephrons, resulting in **acute renal failure (ARF)**. There is rapid loss of kidney function with oliguria and accumulation of nitrogenous wastes in the blood. Failure of the kidneys to eliminate potassium leads to hyperkalemia, along with other electrolyte imbalances and acidosis. When destruction (necrosis) of kidney tubules is involved, the condition may be referred to as *acute tubular necrosis (ATN)*.

Renal failure may lead to a need for kidney **dialysis** or, ultimately[1], **renal transplantation**. Dialysis refers to the movement of substances across a semipermeable[2] membrane; it is a method used to eliminate harmful or unnecessary substances from the body when the kidneys are impaired or have been. Two approaches are used:

- In **hemodialysis**, blood is cleansed by passage over a membrane surrounded by fluid (dialysate) that draws out unwanted substances. Most people on hemodialysis are treated for four hours three times a week in a dialysis center. Some patients are able to use simpler machines at home for daily dialysis.
- In **peritoneal dialysis**, fluid is introduced into the peritoneal cavity. The fluid, along with waste products, is periodically[3] withdrawn and replaced. Fluid may be exchanged at intervals[4] throughout the day in continuous ambulatory[5] peritoneal dialysis (CAPD) or during the night in continuous cyclic peritoneal dialysis (CCPD).

۱- درنهایت
۲- نیمه تراوا
۳- متناوبا
۴- فواصل
۵- متحرک

URINARY STONES

Urinary lithiasis (presence of stones) may be related to infection, irritation, diet, or hormone imbalances that lead to increased calcium in the blood. Most urinary calculi (stones) are made up of calcium salts, but they may be composed of other materials as well. Causes of stone formation include dehydration, infection, abnormal pH of urine, urinary stasis, and metabolic imbalances. The stones generally form in the kidney and may move to the bladder. This results in great pain, termed **renal colic**, and obstruction that can promote infection and cause **hydronephrosis**, collection of urine in the renal pelvis.

هیچ لغت جدیدی نداره اینجا همشو بلدی و باید بتونی ترجمه کنی!

Because they are radiopaque, stones can usually be seen on simple radiographs of the abdomen. Stones may dissolve and pass out of the body on their own. If not, they may be removed surgically, in a **lithotomy**, or by endoscopy. External shock waves are used to crush stones in the urinary tract in a procedure called extracorporeal (outside the body) shock-wave **lithotripsy** (crushing of stones)).

CANCER

Carcinoma of the bladder has been linked[1] to occupational exposure to chemicals, parasitic[2] infections, and cigarette smoking. A key symptom is sudden, painless hematuria. Often, the cancer can be seen by viewing the bladder lining with a **cystoscope**. This instrument[3] can also be used to biopsy tissue for study.

If treatment is not effective in permanently removing the tumor, a **cystectomy** (removal of the bladder) may be necessary. In this case, the ureters must be vented elsewhere, such as directly to the body surface through the ileum in an **ileal conduit**[4], or to some other portion of the intestine.

Cancer may also involve the kidney and renal pelvis. Additional means for diagnosing cancer and other urinary tract disorders include ultrasound, computed tomography scans, and radiographic studies such as **intravenous urography (IVU)**, also called **intravenous pyelography (IVP)**, and **retrograde**[5] **pyelography**.

۱- مرتبط بودن
۲- انگلی
۳- ابزار
۴- مجرا
۵- برگشتی

URINALYSIS

Urinalysis[1] **(UA)** is a simple and widely used method for diagnosing urinary tract disorders. It may also reveal[2] disturbances[3] in other systems when abnormal byproducts are eliminated in the urine. In a routine UA, the urine is grossly[4] examined for color and turbidity[5] (a sign that bacteria are present); **specific gravity (SG)** (a measure of concentration) and pH are recorded; tests are performed for chemical components such as glucose, ketones, and hemoglobin; and the urine is examined microscopically for cells, crystals, and casts. In more detailed tests, drugs, enzymes, hormones, and other metabolites may be analyzed, and bacterial cultures may be performed.

۱- آنالیز ادرار
۲- نشان دادن
۳- تداخل
۴- ماکروسکوپیک
۵- کدورت

از این به هم وصل کنیدهای همیشگی هم یادت نره حل کنی!

1. hematuria ___
2. oliguria ___
3. chromaturia ___
4. albuminuria ___
5. pyuria ___

A. blood in the urine
B. proteinuria
C. elimination of small amounts of urine
D. abnormal color of urine
E. pus in the urine

Answer: 1. A / 2. C / 3. D / 4. B / 5. E

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. A long–term kidney stone infection is called .... (قطب آزاد - شهریور ۹۶)
A) malignant pyelonephritis
B) malignant glomerulonephritis
C) chronic pyelonephritis
D) chronic glomerulonephritis

2. Pain and blood in urination are related to ....and...........respectively.(قطب شمال- اسفند ۹۴) (قطب شمال - اسفند ۹۴)
A) dysuria - hematuria
B) nocturia - hematuria
C) hematuria - dysuria
D) hematuria) nocturia

3. The passage of small amounts of urine is a condition described as.......... (قطب همدان - شهریور ۹۴)
A) Pyuria
B) Oliguria
C) Dysuria
D) Polyuria

4. Congenital absence of a bladder is .... (ریفرم قطب تهران - شهریور ۹۸)
A) acystia
B) anuresis
C) cystotome
D) cystocele

5. If a patient says, " I can't hold my water" , s/he is suffering from urinary .... (قطب اهواز - شهریور ۹۶)
a) urgency
b) hesitancy
c) frequency
d) incontinency

6. The voiding of urine is technically called .... (قطب همدان - اسفند ۹۵)
A) Micturition
B) Gustation
C) Gestation
D) Accommodation

Answers: 1. C,D / 2. A / 3. B / 4. A / 5. D / 6. A

اینم یه متن ادراری (:D) از «**پزشکی ریفرم شهریور ۹۸ – قطب آزاد**» با موضوع هماچوری!!

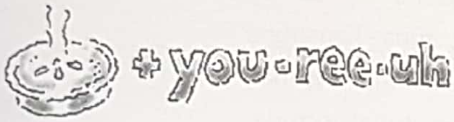
Haematuria, whether microscopic or gross, may be a sign of urinary tract malignancy[1] or renal parenchymal disease. Accordingly, most physicians have a low threshold for working up any significant haematuria- but what degree of haematuria is significant enough to warrant a workup? Up to 18% of normal persons excrete[2] red blood cells into the urine, averaging approximately 2 million RBCs per 24 hours or 2RBCs per high power field. Moreover, improper collection and study can yield false- positive or –negative results. The trauma associated with exercise or jogging, for example, can cause an increase in urinary RBC excretion. It has been demonstrated[3] that if urine is stored for more than 2 and a half hours, 50% of RBCs will lyse and most casts in the sediment[4] will disintegrate[5] .

۱- بدخیمی
۲- دفع کردن
۳- نشان دادن
۴- رسوب
۵- متلاشی شدن

1. Which statement is <u>not</u> correct? A) There are two types of haematuria B) Healthy people do not discharge any RBCs C) Urinary tract cancer can be shown by heamaturia D) Haematuria can indicate a problem with the functional parts of kidney	**2. .... cannot be the cause of haematuria.** A) Joggoing B) Cycling C) Malignancies D) Sedimentation	**3. False- negative test result can be due to ....** A) disintegration of RBCs B) improper specimen collection C) abstaining from exercise D) long-term specimen storation **Answers:** 1. B / 2. D / 3. B

اینم یه بازی کوچولو باحال!! ببین میتونی حدس بزنی که عکس داره چه کلمه‌ای رو میگه؟

1.



2.



3.



4.





Answer:

1. Pyuria
2. Cystourethroscopy
3. cylix
4. Henle

فصل ۱۲ دستگاه تولید مثل و بارداری
Unit 12 Reproductive System And Pregnancy

در اصل باید این مبحث دو یا سه فصل می‌بود ولی دیدم تستاش کمه درنتیجه سر هم کردمش. درنهایت از این درس کلی لغت یاد میگیری. تست هم البته میذارم آخرش ولی جزو اولویت‌های آخرت بذار این مبحث رو.

◈ بررسی دستگاه تولید مثل مردان از نظر ساختاری و عملکردی:

■ INTRODUCTION

The function of the **gonads**[1] (sex glands) in both males and females is to produce the reproductive cells, the **gametes**[2], and to produce hormones. The gametes are generated by **meiosis**, a process of cell division that halves[3] the chromosome number from 46 to 23 . When male and female gametes unite in fertilization[4], the original chromosome number is restored[5] .

Sex hormones aid in the manufacture[6] of gametes, function in pregnancy[7] and lactation[8], and also produce the secondary sex characteristics such as the typical size, shape, body hair, and voice that we associate with the male and female genders.

The reproductive tract develops in close association with the urinary tract. In females, the two systems become completely separate, whereas the male reproductive and urinary tracts share a common[9] passage, the **urethra**. Thus, the two systems are referred together as the genitourinary (GU) or urogenital (UG) tract, and urologists are called on to treat disorders of the male reproductive system as well as those of the urinary system

۱- غدد جنسی
۲- گامت
۳- نصف کردن
۴- لقاح
۵- بازگرداندن
۶- تولید کردن
۷- بارداری
۸- شیردهی
۹- مشترک

■ THE TESTIS

The male germ cells, the sperm cells or **spermatozoa** (singular: spermatozoon), are produced in the paired[1] **testes** (singular: testis[2]) that are suspended[3] outside of the body in the **scrotum**[4]. Although the testes develop in the abdominal cavity, they normally descend through the **inguinal canal** into the scrotum before birth or shortly thereafter[5] .

From the start of sexual maturation[6], or **puberty**[7], spermatozoa form continuously within the testes in coiled[8] seminiferous tubules. Their development requires the aid of special **Sertoli cells** and male sex hormones, or **androgens**, mainly **testosterone**. These hormones are manufactured in **interstitial cells** located between the tubules. In both males and females, the gonads are stimulated by **follicle-stimulating hormone (FSH)** and **luteinizing hormone (LH)**, released from the anterior **pituitary**[9] **gland** beneath the brain. These hormones are chemically the same in males and females, although they are named for their actions in female reproduction. In males, FSH stimulates the Sertoli cells and promotes the formation of spermatozoa. LH stimulates the interstitial[10] cells to produce testosterone

۱- جفت
۲- بیضه
۳- آویزان
۴- کیسه بیضه
۵- بعد از آن
۶- بلوغ جنسی
۷- بلوغ
۸- پیچ خورده
۹- هیپوفیز
۱۰- بینابینی

■ TRANSPORT OF SPERMATOZOA

After their manufacture, sperm cells are stored in a much-coiled tube on the surface of each testis, the **epididymis**. Here, they remain until **ejaculation**[1] propels[2] them into a series of ducts that lead out of the body. The first of these is the **ductus (vas) deferens**, which is contained in the **spermatic cord** along with nerves and blood vessels that supply the testis. The spermatic cord ascends through the inguinal canal into the abdominal cavity, where the ductus deferens leaves the cord and travels behind the bladder.

A short continuation of the ductus deferens, the **ejaculatory duct**, delivers spermatozoa to the urethra as it passes through the **prostate gland** below the bladder. Finally, the cells, now mixed with other secretions, travel in the urethra through the penis to be released.

۱- انزال
۲- به پیش راندن

THE PENIS[1]

The penile[2] urethra transports both urine and **semen**[3]. The **penis** is the male organ of sexual intercourse[4], or **coitus**[4]. It is composed of three segments of spongy tissue, which become engorged[5] with blood to produce an **erection**[6], a stiffening[7] of the penis. The two corpora cavernosa are lateral bodies; the corpus spongiosum, through which the urethra travels, is in the center. The corpus spongiosum enlarges at the tip[8] to form the **glans**[9] **penis**, which is covered by loose skin—the **prepuce**[10], or foreskin[10]. Surgery to remove the foreskin is **circumcision**[11]. This may be performed for medical reasons but is most often performed electively[12] in male infants for reasons of hygiene, cultural preferences[13], or religion[14].

۱- آلت تناسلی
۲- مربوط به آلت تناسلی
۳- مایع منی / ۴- مقاربت
۵- انباشته شدن / ۶- نعوظ
۷- سفت شدن / ۸- نوک
۹- حشفه، کلاهک آلت / ۱۰- پیش‌پوست
۱۱- ختنه / ۱۲- انتخابی
۱۳- ترجیح فرهنگی / ۱۴- دینی

FORMATION OF SEMEN

Semen is the thick[1], whitish[2] fluid that transports spermatozoa. It contains, in addition to sperm cells, secretions from three types of accessory glands. Following the sequence of sperm transport, these are:

1. The paired **seminal vesicles**, which release their secretions into the ejaculatory duct on each side.
2. The prostate gland, which secretes into the first part of the urethra beneath the bladder. As men age, prostatic enlargement may compress the urethra and cause urinary problems.
3. The two **bulbourethral** (Cowper) **glands**, which secrete into the urethra just below the prostate gland.

Together, these glands produce a slightly alkaline mixture that nourishes[3] and transports the sperm cells and also protects them by neutralizing[4] the acidity of the female vaginal tract.

۱- غلیظ
۲- سفید
۳- تغذیه کردن
۴- خنثی کردن

◈ بررسی دستگاه تولید مثل مردان از نظر بالینی:

INFECTION

Most infections of the male reproductive tract are **sexually transmitted infections (STIs**. The most common STI in the United States is caused by the bacterium *Chlamydia trachomatis*, which mainly causes **urethritis** in males. This same organism also causes lymphogranuloma venereum, an STI associated with lymphadenopathy, which occurs most commonly in tropical[1] regions. Both forms of these chlamydial infections respond to treatment with antibiotics.

Gonorrhea[2] is caused by *Neisseria gonorrhoeae*, the gonococcus (GC). Infection usually centers in the urethra, causing urethritis with burning[3], a purulent[4] discharge, and dysuria. Mumps is a nonsexually transmitted viral disease that can infect the testes and lead to **sterility**[5]. Other microorganisms can infect the reproductive tract as well, causing urethritis, **prostatitis**, **orchitis**, or **epididymitis**.

۱- استوایی
۲- سوزاک
۳- سوزش
۴- چرک
۵- عقیمی

BENIGN PROSTATIC HYPERPLASIA

As men age, the prostate gland commonly enlarges, a condition known as **benign prostatic hyperplasia (BPH)**. Although not cancerous, this overgrown tissue can press on the urethra near the bladder and interfere with urination. Urinary retention[1], infection, and other complications may follow if an obstruction is not corrected. Medications to relax smooth muscle in the prostate and bladder neck are used to treat the symptoms of BPH.

In advanced cases of BPH, removal[2] of the prostate, or **prostatectomy**, may be required. BPH is diagnosed by digital[3] rectal examination (DRE) or imaging studies.

۱- احتباس
۲- برداشت
۳- انگشتی

CRYPTORCHIDISM

It is fairly[1] common that one or both testes will fail to descend into the scrotum by the time of birth. This condition is termed **cryptorchidism**, literally hidden (crypt/o) testis (orchid/o). The condition usually corrects itself within the first year of life. If not, it must be corrected surgically to avoid sterility and an increased risk of cancer.

۱- نسبتا

INFERTILITY

An inability or a diminished[1] ability to reproduce is termed **infertility**[2]. Its causes may be hereditary, hormonal, disease-related, or the result of exposure to chemical or physical agents. The most common causes of infertility are STIs. A total inability to produce offspring may be termed sterility. Men may be voluntarily[3] sterilized by cutting and sealing[4] the vas deferens on both sides in a **vasectomy**.

۱- کاهش یافته
۲- ناباروری
۳- اختیاری
۴- بستن

INGUINAL HERNIA

The inguinal canal, through which the testis descends, may constitute[1] a weakness in the abdominal wall that can lead to a hernia. In the most common form of **inguinal hernia**, an abdominal organ, usually the intestine, enters the inguinal canal and may extend into the scrotum. This is an indirect, or external, inguinal hernia. In a direct, or internal, inguinal hernia, the organ protrudes[2] through the abdominal wall into the scrotum. If blood supply to the organ is cut off, the hernia is said to be *strangulated*[3]. Surgery to correct a hernia is a **herniorrhaphy**.

۱- تشکیل دادن
۲- بیرون زدن
۳- خفه شدن

اینا یه سری ریشه مربوط به **دستگاه تولید مثل مردان:**

Root	Meaning	Example	Definition of Example
test/o	بیضه	testosterone (تستوسترون)	هورمونی که در بیضه تولید می‌شود
,orchi/o orchid/o	بیضه	anorchism (آنورکیسم)	فقدان بیضه
osche/o	کیسه بیضه	oscheal (اوسکیال)	مربوط به اسکروتوم
semin	مایع منی	inseminate (اینسمینیت)	در معرض اسپرم قرار گرفتن واژن
sperm/i, spermat/o	مایع منی، اسپرم	polyspermia (پلی‌اسپرمیا)	ترشح بیش از حد منی
epididym/o	اپیدیدیم	epididymitis (اپیدیدیمایتیس)	التهاب اپیدیدیمایتیس
vas/o	واز دفران، رگ	vasostomy (وازوستومی)	ایجاد منفذ در واز دفران به کمک جراحی
vesicl/o	وزیکول سمینال	vesiculogram (وزیکولوگرام)	رادیوگراف از وزیکول سمینال
prostat/o	پروستات	prostatometer (پروستاتومیتر)	ابزاری جهت اندازه گیری پروستات

یه سوال کوچیک هم حل کنین

1. pain in the prostate
2. plastic repair of scrotum
3. surgical fixation of a testis
4. destruction (-lysis) of sperm
5. heamosperima is the presence of blood in the ____

Answer: 1. Prostatodynia / 2. Oscheoplasty / 3. Orchiopexy/ 4. Spermolysis / 5. Semen

از این به هم وصل کنیدهای همیشگی هم یادت نره حل کنی!

__ 1. vasectomy
__ 2. circumcision
__ 3. coitus
__ 4. glans
__ 5. priapism
__ 6. balanitis

A. excision of the ductus deferens
B. surgical removal of the foreskin
C. end of the penis
D. sexual intercourse
E. prolonged erection of the penis
F. inflammation of the glens penis

Answer: 1. A / 2. B / 3. D / 4. C / 5. E / 6. F

◈ بررسی دستگاه تولید مثل زنان از نظر ساختاری و عملکردی:

■ THE FEMALE REPRODUCTIVE SYSTEM

The female gonads are the paired **ovaries** (singular: ovary[1]) that are held by ligaments[2] in the pelvic cavity on either side of the uterus It is within the ovaries that the female gametes, the eggs or **ova** (singular: ovum[3]), develop. At the time of **ovulation**, usually only one ovum is released from an ovary, and the remainder of the ripening[4] ova degenerate. The follicle remains behind and continues to function for about two weeks if the ovum is not fertilized and for about two months if the ovum is fertilized.

After ovulation, the ovum travels into a **uterine tube**, also called the **fallopian tube**, attached to the upper lateral portion of the uterus. This tube arches[5] above the ovary and has finger-like projections[6] called **fimbriae** that sweep[7] the released ovum into the uterine tube. The uterus is the organ that nourishes the developing offspring. It is with a lower narrow **cervix**[8] that projects into the **vagina**[9]. At the posterior cervix, the peritoneum dips[10] downward to form a blind pouch[11], the lowest point of the peritoneal cavity. This region is also called the *rectouterine pouch*.

The innermost layer of the uterine wall, the **endometrium**, has a rich blood supply. It receives the fertilized[12] ovum and becomes part of the placenta[13] during pregnancy. The endometrium is shed[14] during the menstrual period[15] if no fertilization occurs. The muscle layer of the uterine wall is the **myometrium**.

In both males and females, the region between the thighs[16] from the external genital organs to the anus is the **perineum**. During childbirth, an incision may be made between the vagina and the anus to facilitate[17] birth and prevent the tearing[18] of tissue, a procedure called an *episiotomy*. (This procedure is actually a perineotomy, as the root episi/o means "vulva.")

۱- تخمدان / ۲- رباط
۳- تخمک / ۴- کامل شدن
۵- قوس زدن
۶- بیرون زدگی
۷- جارو کردن
۸- گردن رحم
۹- واژن
۱۰- پایین آمدن
۱۱- کیسه بن بست
۱۲- بارور
۱۳- جفت
۱۴- ریزش
۱۵- دوره قاعدگی
۱۶- ران
۱۷- تسهیل کردن
۱۸- پاره کردن

■ THE MENSTRUAL CYCLE

Female reproductive activity normally begins during puberty[1] with **menarche**[2], the first menstrual period. Each month, the menstrual cycle is controlled, as is male reproductive activity, by hormones from the anterior pituitary gland.

FSH begins the cycle by causing the ovum to ripen in the ovarian follicle. The follicle secretes **estrogen**, a hormone that starts endometrial development in preparation for the fertilized egg.

۱- بلوغ
۲- اولین دوره قاعدگی

A fungus that infects the vulva and vagina is *Candida albicans*, causing **candidiasis**. The resultant **vaginitis**, inflammation of the vagina, causes itching and release of a thick, white, cheesy discharge[7]. Pregnancy, diabetes mellitus, and use of antibiotics, steroids, or birth control pills predispose[8] to this infection. Antifungal agents (mycostatics) are used in treatment.

Pelvic inflammatory disease (PID) is the spread of infection from the reproductive organs into the pelvic cavity. It is most often caused by the gonorrhea organism or by *Chlamydia*, although bacteria normally living in the reproductive tract may also be responsible when conditions allow. PID is a serious disorder that may result in septicemia or shock. Inflammation of the uterine tubes, called **salpingitis**, may close off these tubes and cause infertility.

۷- ترشح پنیری سفید
۸- مستعد کردن

■ ENDOMETRIOSIS

Growth of endometrial tissue outside the uterus is termed **endometriosis**. Commonly, the ovaries, uterine tubes, peritoneum, and other pelvic organs are involved. Stimulated by normal hormones, the endometrial tissue causes inflammation, fibrosis, and adhesions in surrounding areas. The results may be pain, **dysmenorrhea** (painful or difficult menstruation), and infertility.

■ MENSTRUAL DISORDERS

Menstrual abnormalities include flow that is too scanty[1] (oligomenorrhea) or too heavy[2] (menorrhagia) and the absence[3] of monthly periods (amenorrhea). Dysmenorrhea, when it occurs, usually begins at the start of menstruation and lasts one to two days. Together, these disorders are classified as dysfunctional uterine bleeding (DUB). These responses may be caused by hormone imbalances, systemic disorders, or uterine problems. They are most common in adolescence[4] or near menopause. At other times, they are often related to life changes and emotional upset[5].

Premenstrual[6] syndrome (PMS) describes symptoms that appear during the menstrual cycle's second half and includes emotional changes, fatigue, bloating[7], headaches, and appetite[8] changes. Possible causes of PMS have been under study. Symptoms may be relieved by hormone therapy, antidepressants, or antianxiety medications. Exercise, dietary control, rest, and relaxation strategies may also be helpful. Avoiding caffeine and taking vitamin E supplements may relieve breast tenderness; one should also drink adequate water and limit salt intake.

۱- کم
۲- زیاد
۳- فقدان
۴- جوان
۵- ناراحتی احساسی
۶- پیش از قاعدگی
۷- نفخ
۸- اشتها

■ POLYCYSTIC OVARIAN SYNDROME

Polycystic ovarian syndrome (PCOS) is discussed here because the first-described symptoms of this disorder were enlarged ovaries with multiple cysts. These signs are not always present in PCOS, although the ovaries do show abnormalities. PCOS is an endocrine disorder involving increased androgen and estrogen secretion that interferes with normal secretion of pituitary FSH and LH. Some effects include:

- Anovulation[1] and infertility
- Scant or absent menses (oligomenorrhea or amenorrhea)
- Excessive hair growth (hirsutism), caused by excess androgen (male hormone)
- Resistance[2] to insulin, a hormone that lowers blood sugar, resulting in symptoms of diabetes mellitus
- Obesity[3]

۱- عدم تخمک گذاری
۲- مقاومت
۳- چاقی

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۱- کم
۲- زیاد
۳- فقدان
۴- جوان
۵- ناراحتی احساسی
۶- پیش از قاعدگی
۷- نفخ
۸- اشتها

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۱- عدم تخمک گذاری
۲- مقاومت
۳- چاقی

اینا یه سری ریشه مربوط به **دستگاه تولید مثل زنان و تخمدان**:

Root	Meaning	Example	Definition of Example
gyn/o gynec/o	زن	gynecology (گاینکولوژی)	مطالعه بیماری‌های زنان
men/o, mens	ماه، قاعدگی	premenstrual (پری‌منستچرال)	قبل از دوره قاعدگی
oo	تخمک	oocyte (اووسایت)	سلول‌هایی که تخمک را ایجاد می‌کنند
ov/o, ovul/o	تخمک	anovulatory (آن‌اوولیتری)	فقدان تکامل تخمک یا تخمک گذاری
ovari/o	تخمدان	ovariopexy (اوواریوپکسی)	فیکساسیون تخمدان به کمک جراحی
oophor/o	تخمدان	oophorectomy (اوفورکتومی)	برداشت تخمدان

اینا هم یه سری ریشه مربوط به **لوله رحمی، رحم و واژن**:

Root	Meaning	Example	Definition of Example
salping/o	لوله رحمی	Salpingoplasty (سالپینگوپلاستی)	ترمیم پلاستیک لوله رحمی
uter/o	رحم	intrauterine (اینترایوتراین)	درون رحم
metr/o, metr/i	رحم	metrorrhea (مترورئا)	ترشح غیرطبیعی رحم
hyster/o	رحم	hysterotomy (هیستروتومی)	برش رحم
cervic/o	گردن رحم، گردن	endocervical (اندوسرویکال)	مربوط به پوشش گردن رحم
vagin/o	واژن	vaginometer (واژینومیتر)	ابزاری برای اندازه گیری واژن
colp/o	واژن	colpostenosis (کولپوستنوزیس)	تنگی واژن

اینا نیز یه سری ریشه مربوط به ساختارهای فرعی زنان:

Root	Meaning	Example	Definition of Example
vulv/o	وولو	vulvar (وولوار)	مربوط به وولو
episi/o	وولو	epistotomy (اپیستوتومی)	برش وولو
perine/o	پرینه	perineal (پرینئال)	مروبط به پرینه
,clitor/o clitorid/o	کلیتوریس	clitorectomy (کلیتوریکتومی)	برداشت کلیتوریس
mamm/o	پستان، غدد پستانی	mammoplasty (ماموپلاستی)	جراحی پلاستیک پستان
mast/o	پستان، غدد پستانی	amastia (ای‌مستیا)	فقدان پستان

یه سوال کوچیک هم حل کنین

1. rupture (-rhexis) of and ovary
2. scanty menstrual flow
3. enlargement of the clitoris
4. suture of the vulva (episi/o)
5. absence of the breast (mast/o)

Answer: 1. Ovarirrhexis / 2. oligomenorrhea / 3. Clitoromegaly / 4. Episirrhaphy / 5. Amastia

◈ بررسی بارداری و تولد از نظر ساختاری و عملکردی:

■ FERTILIZATION AND EARLY DEVELOPMENT

Penetration of an ovulated egg cell by a spermatozoon results in **fertilization**[1]. This union[2] normally occurs in the uterine tube. The nuclei of the sperm and ovum fuse[3], restoring the chromosome number to 46 and forming a **zygote**. As the zygote travels through the uterine tube toward the uterus, it divides rapidly. Within six to seven days, the fertilized egg reaches the uterus and implants into the endometrium, and the **embryo**[4] begins to develop. After two months, placental hormones take over this function, and the corpus luteum degenerates. At this time, the embryo becomes a **fetus**[5].

۱- لقاح
۲- پیوستگی، وصلت
۳- ادغام شدن
۴- رویان
۵- جنین

■ THE PLACENTA

During development[1], the fetus is nourished by the **placenta**, an organ formed from the embryo's outermost layer, the **chorion**, and the endometrium, the innermost layer of the uterus. Here, exchanges take place between the bloodstreams of the mother and the fetus through fetal capillaries.

The **umbilical cord**[2] contains the blood vessels that link the fetus to the placenta. Fetal blood is carried to the placenta in two umbilical arteries. While traveling through the placenta, the blood picks up nutrients and oxygen and gives up carbon dioxide and metabolic waste. Replenished[3] blood is carried from the placenta to the fetus in a single umbilical vein.

During **gestation**[4] (the period of development), the fetus is cushioned and protected by fluid contained in the **amniotic sac** (amnion). This sac ruptures at birth.

۱- تکوین
۲- بند ناف
۳- دوباره پر شدن
۴- بارداری

CHILDBIRTH

The length of pregnancy, from fertilization of the ovum to birth, is about 38 weeks, or 266 days. In practice, it is calculated as approximately 280 days or 40 weeks from the first day of the last menstrual period (LMP). For study purposes, pregnancy is divided into three-month periods (trimesters), during which defined changes can be observed in the fetus. Childbirth, or **parturition**[1], occurs in three stages:

1. Onset of regular uterine contractions and dilation of the cervix
2. Expulsion[2] of the fetus
3. Delivery of the placenta and fetal membranes

۱- زایمان
۲- خروج

The third stage of childbirth is followed by contraction of the uterus and control of bleeding. The factors that start labor[1] are not completely understood, but it is clear that the hormone **oxytocin** from the posterior pituitary gland and other hormones called **prostaglandins** are involved.

۱- درد زایمان، زایمان

The term **gravida** refers to a pregnant[2] woman. The term **para** refers to a woman who has given birth. This means the production of a viable[3] infant (500 g or more or over 20 weeks gestation) regardless of whether the infant is alive at birth or whether the birth is single or multiple. Prefixes are added to both terms to indicate the number of pregnancies or births, such as:

nulli (none) / primi (one) / secondi (two) / tri or terti (three) / quadri (four) / multi (two or more)

Alternatively[4], a number can be added after the term to indicate events, such as gravida 1, para 3, and ...

۲- باردار
۳- زیست پذیر
۴- از سوی دیگر

LACTATION

The hormone prolactin from the anterior pituitary gland, as well as hormones from the placenta, start the secretion of milk from the breasts, called **lactation**[1]. The baby's suckling[2] then stimulates milk release. The pituitary hormone oxytocin is needed for this release or "letdown" of milk. For the first few days after delivery[3], only **colostrum**[4] is produced. This has a slightly different composition than milk, but like the milk, it has protective antibodies.

۱- شیردهی
۲- مکیدن
۳- زایمان
۴- آغوز

◈ بررسی دستگاه تولید مثل زنان از نظر بالینی:

INFERTILITY

About 10 to 15 percent of couples who want children are unable to conceive[1] or to sustain[2] a pregnancy. In men, these causes include low sperm count, low sperm motility[3] blockage of the ducts that transport the sperm cells, and erectile dysfunction[4]. In women they include:

- Lack of ovulation
- Blockage in the uterine tubes, as caused by infection or excess growth of tissue
  Uterine problems, such as tumors or abnormal growth of endometrial tissue
  Cervical scarring or infection
- Excess vaginal acidity, which harms spermatozoa, or antibodies to sperm cells
- Drugs, including temporary or permanent infertility following cessation of birth control pills

۱- انعقاد نطفه
۲- حفظ
۳- تحرک
۴- اختلال نعوظ

ECTOPIC PREGNANCY

Development of a fertilized egg outside of its normal position in the uterine cavity is termed an **ectopic pregnancy**[1]. Although it may occur elsewhere in the abdominal cavity, an ectopic pregnancy usually occurs in the uterine tube, resulting in a tubal pregnancy. Salpingitis, endometriosis, and PID may lead to ectopic pregnancy by blocking the ovum's passage into the uterus. Continued growth will rupture the tube, causing dangerous hemorrhage. Symptoms of ectopic pregnancy are pain, tenderness, swelling, and shock. Diagnosis is by measurement of the hormone hCG and **ultrasonography**, confirmed by laparoscopic examination. Prompt surgery is required, sometimes including removal of the tube.

۱- بارداری نابه‌جا

PLACENTAL ABNORMALITIES

If the placenta attaches near or over the cervix instead of in the upper portion of the uterus, the condition is termed **placenta previa**[1]. This disorder may cause bleeding later in the pregnancy. If bleeding is heavy, it may be necessary to terminate the pregnancy.

Placental abruption[2] describes premature[3] separation of the placenta from its point of attachment. The separation causes hemorrhage, which, if extensive, may result in fetal or maternal death or a need to end the pregnancy. Causative factors include injury, maternal hypertension, and advanced maternal age.

۱- جفت سرراهی
۲- افتادگی جفت
۳- زودرس

MASTITIS

Inflammation of the breast, or **mastitis**, may occur at any time but usually occurs in the early weeks of breast-feeding. It is commonly caused by staphylococcal or streptococcal bacteria that enter through cracks[1] in the nipple[2]. The breast becomes red, swollen[3], and tender, and the patient may experience chills, fever, and general discomfort.

۱- شکاف
۲- نوک پستان
۳- متورم

CONGENITAL DISORDERS

Congenital disorders[1] are those present at birth (birth defects[2]). They fall into two categories:

- Developmental disorders that occur during fetal growth
- Hereditary[3] (familial) disorders that can be passed from parents to children through the germ cells

A **carrier**[4] of a genetic disorder is an individual who has a genetic defect that does not appear but that can be passed to offspring. Laboratory tests can identify carriers of some genetic disorders.

Teratogens are factors that cause malformations in the developing fetus. These include infections—such as rubella, herpes simplex, and syphilis—alcohol, drugs, chemicals, and radiation. The fetus is most susceptible to teratogenic effects during the first three months of pregnancy.

Examples of developmental disorders are **atresia** (absence or closure of a normal body opening), **anencephaly** (absence of a brain), **cleft lip**[5], **cleft palate**[6], and congenital heart disease.

Note that folic acid or folate, a B vitamin, can prevent embryonic spinal malformations, known as neural tube defects. This vitamin is found in vegetables, liver, legumes, and seeds, but it is now added to some commercial[7] foods, including cereals and breads, to provide young women with this vitamin early on in case they become pregnant.

۱- اختلالات مادرزادی (خدادادی)
۲- نواقص تولد
۳- ارثی
۴- ناقل
۵- شکاف لب (لب شکری)
۶- شکاف کام
۷- تجاری

یه سری ریشه هم مربوط به بارداری و تولد:

Root	Meaning	Example	Definition of Example
amnio	آمنیون، کیسه آمنیون	diamniotic (دای‌آمنیوتیک)	مشاهده دو کیسه آمنیون
embry/o	رویان	embryonic (امبریانیک)	مربوط به رویان
fet/o	جنین	fetometry (فیتومتری)	اندازه گیری جنین
toc/o	زایمان	dystocia (دیستوسیا)	زایمان سخت
nat/i	تولد	neonate (نئونیت)	نوزاد
lact/o	شیر	lactose (لاکتوز)	قند موجود در شیر
galact/o	شیر	galactogogue (گالاکتوگوگ)	دارو جهت افزایش جریان شیر
gravida	زن باردار	nulligravida (نالی گراویدا)	زنی که هیچگاه باردار نبوده
para	زنی که زایمان کرده	multipara (مولتی‌پارا)	زنی که دو یا بیشتر زایمان داشته

یه به هم وصل کنید جمع بندی طور حل کن بریم سراغ تست:

___ 1. vulva
___ 2. gestation
___ 3. oxytocin
___ 4. zygote
___ 5. clitoris

A. fertilized egg
B. female erectile tissue
C. external female genitalia
D. period of development in the uterus
E. hormone that stimulates labor

___ 6. menostasis
___ 7. metrorrhagia
___ 8. menarche
___ 9. gynecogenic
___ 10. metratrophia

A. first menstrual period
B. excess uterine bleeding
C. suppression of menstruation
D. wasting of uterine tissue
E. producing female characteristics

Answer: 1. C / 2. D / 3. E / 4. A / 5. B / 6. C / 7. B / 8. A / 9. E / 10. D

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

قطب شمال - اسفند ۹۳

1. One of the conditions associated with male reproductive system is "Spermatorrhea" which refers to ....

A) Having sperm in the urine
B) Destruction of the sperm cells
C) Excessive discharge of sperm
D) Formation of spermatozoa

قطب شهید بهشتی - شهریور ۹۳

2. Using lubrication, the index finger is gently inserted into the rectum. The prostate is ...., and any modules, indurations or asymmetry should be noted.

A) Touched
B) Visualized
C) Palpated
D) Detected

میان‌دوره کشوری - اردیبهشت ۹۷

3. The effects of environment on infertility continue to be studied and....

A) proscribe
B) disregarde
C) debate
D) regretted

قطب کرمان - شهریور ۹۵

4. Excessive uterine bleeding, both at the usual time of menstrual periods and at other irregular intervals...........

A) menorrhagia
B) menometrorrhagia
C) metrorrhagia
D) polymenorrhea

قطب مشهد - شهریور ۹۶

5. Mrs. Akbari was undergoing a normal vaginal delivery. Her gynecologist performed a (an) .... to facilitate the procedure.

A) episiotomy
B) clitorectomy
C) laparotomy
D) vulvolotomy

قطب همدان - اسفند ۹۵

6. Use of artificial methods to prevent fertilization is termed:

A) Antiception
B) Interruption
C) Coltus
D) Contraception

قطب همدان - شهریور ۹۷

7. Wich of the following indicates the use of surgery in order to provide permanen contraception in both male and female volunteers?

A) Tubal ligation
B) Vasectomy
C) Hormonal replacement
D) Sterilization

میان‌دوره کشوری - خرداد ۹۸

8. "Which of the following terms refers to "scanty menstrualflow?

A) Dysmenorrheal
B) Oligomenorrhea
C) amenorrhea
D) hypomenorrhea

قطب همدان - اسفند ۹۷

9. Which of the following is the term for abnormally large breasts in men?

A) Gynecomastia
B) Gynecomania
C) Gynephobia
D) Gynoplastics

قطب شیراز - شهریور ۹۷

10. The patient's complaint of painful menstrual periods is documented in the medical record as

A) Amenorrhea
B) Dysmenorrhea
C) Menorrhagia
D) Menorrhea

11. Which of the following words is different from the others in terms of body systems? (قطب اهواز – اسفند ۹۷)
A) Hysterectomy
B) Salpingitis
C) C-section
D) Fibrillation

12. Pregnancy outside mother's uterus is called................ (قطب کرمان – شهریور ۹۳)
A) Multigravida
B) Extra tubal pregnancy
C) Multiparous
D) Ectopic pregnancy

13. "Difficult labor" is medically called .... (قطب مشهد – شهریور ۹۴)
A) Eclampsia
B) Dyspareunia
C) Dystocia
D) Metratrophia

14. Inflammation of tissue near the uterus is .... (قطب شمال – شهریور ۹۵)
A) Parabiosis
B) Parametritis
C) Paradoxical
D) Parachronism

15. The medical term applied for describing the period of development of the young in viviparous animals is .... (پزشکی میان‌دوره کشوری – دی ۹۹)
A) lactation
B) gestation
C) propagation
D) pronation

16. "A patient was diagnosed with breast cancer.The doctor recommended the removal of the mass. The medical term used to this procedure is ... . (قطب دانشگاه شهید بهشتی – اسفند ۹۵)
A) Lumpectomy
B) Lithotherapy
C) Endoscopy
D) Mastectomy

17. Which of the following is a surgical procedure in which a pendulous breast is lifted and fixed to the chest wall? (قطب شیراز – اسفند ۹۷)
A) Mastostomy
B) Mastotomy
C) Mastectomy
D) Mastopexy

18. The placenta also functions as a defense mechanism against certain pathologic microorganisms and .... substances. (قطب شمال – شهریور ۹۴)
A) Natural
B) Noxious
C) Dormant
D) Doubtful

19. The process by which the fetus and placenta are pushed out of the uterus is called: (قطب اهواز – شهریور ۹۳)
A) Presentation
B) Labor
C) Miscarriage
D) Induction

20. Mrs. Asadi is a gravida 3 para 2. This means: (قطب مشهد – اسفند ۹۴)
A) She has five children from three pregnancies
B) She has two children and three pregnancies
C) She has three pregnancies and two births
D) She has one set of twins

21. The suffix '-tocia' in the medical term 'xerotocia' refers to the condition of .... (کلاسیک قطب تبریز – شهریور ۹۸)
A) labor
B) fear
C) rotation
D) speech

22. The normal labor or .... Is a desirable issue in Pregnancy and Birth. (ریفرم قطب شمال – شهریور ۹۸)
A) nullipara
B) neonate
C) eutocia
D) lactation

Answers: 1. C / 2. C / 3. C / 4. B / 5. A / 6. D / 7. D / 8. B / 9. A / 10. B / 11. D / 12. D
13. C / 14. B / 15. B / 16. A / 17. D / 18. B / 19. B / 20. C / 21. A / 22. C

اینم یه متن از «پزشکی شهریور ۹۳ - قطب کرمان، همدان و تهران». متن قدیمی هم خودتی !!

One of the medicine's fundamental[1] beliefs about pregnancy and the development of the human fetus has been challenged[2]. Until recently, it was thought that the fetus was a parasite, capable of extracting[3] all the nutrients it needed from the mother. It is now realized that adequate nutrition during the entire course[4] of pregnancy is required for proper fetus development. In early pregnancy, certain changes occur in the mother's gastrointestinal tract, resulting in more efficient absorption of specific nutrients, such as iron and calcium. Furthermore, the maternal blood supply increases, so that nutrients can be transported via the uterine and placental blood systems. If the mother is undernourished, this "lifeline" to the fetus will be inadequately[5] developed. Finally, fat is accumulated within the body to store the energy necessary for lactation. This preparation for lactation is so important that if the mother is inadequately nourished, it will take place even at the expense[6] of fetal growth, suggesting that fetal growth is of less priority[7].

۱- اساسی
۲- به چالش کشیده شدن
۳- استخراج کردن
۴- دوره
۵- ناکافی
۶- به خرج
۷- اهمیت، اولویت

1. According to the passage, which of the following traditional beliefs has been questioned?

A) The fetus can take all its necessary nutrients from the mother

B) The fetus does not grow unless lactation occurs

C) Adequate nutrition is necessary during pregnancy

D) Important changes occur in early pregnancy

2. It is stated in the passage that .... is required for lactation.

A) Iron and calcium supply

B) An increased blood supply

C) Fat storage

D) A well- nourished placenta

3. The term "lifeline" mentioned in line 8, refers to mother's ... ...

A) Gastrointestinal tract

B) Uterine and placental blood supply systems

C) Adequate nutrition

D) Absorption of specific nutrients

4. In pregnancy, ... is precedent to the fetal growth.

A) Parasitic capabilities of the fetus

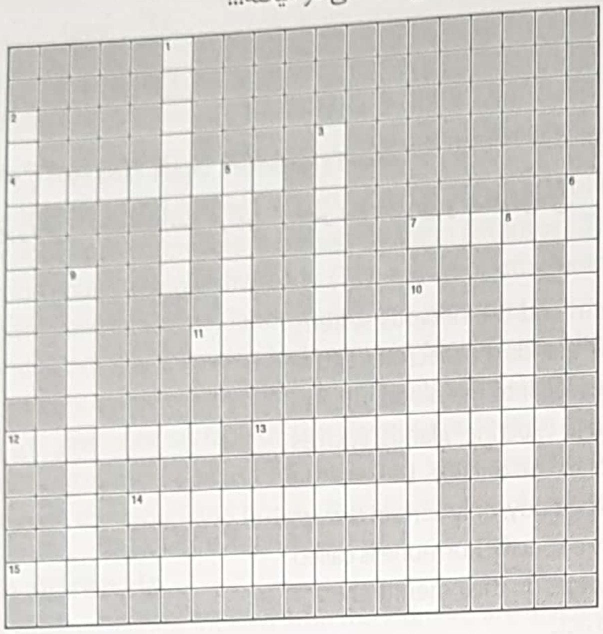
B) Fetal fat accumulation

C) Successful breastfeeding

D) Preparation for lactation

Answers: 1. A / 2. C / 3. C / 4. D

اینم یه جدول که خستگی در کنی! الان به من فحش میده میگه کی با جدول با موضوع درسی خستگی در میکنه!!!



Across

11. Breast-feeding
7. Postpartum vaginal discharge
11. Period of pregnancy that begins with conception and ends with childbirth
12. A pregnant female
13. The first noticeable fetal movement in utero
14. Thinning and shortening of the cervix
15. Rh incompatibility

Down

1. The termination of a pregnancy
2. First milk produced after childbirth
3. Endometrial lining of the uterus
5. Precursor of the ovum
6. Process by which birth of the fetus is achieved
8. An excessive amount of amniotic fluid
9. Cells that move by means of flagellar movements
10. Also called fertilization

اینم پاسخش:

					[1] A													
					B													
[2] C					O													
O					R					[3] D								
[4] L	A	C	T	A	T	I	[5] O	N		E								
O					I		O			C								[6] L
S					O		C			I			[7] L	O	C	[8] H	I	A
T		[9] S			N		Y			D						Y		B
R		P					T			U			[10] C			D		O
U		E				[11] G	E	S	T	A	T	I	O	N		R		R
M		R											N			A		
		M											C			M		
[12] G	R	A	V	I	D	A		[13] Q	U	I	C	K	E	N	I	N	G	
		T											P			I		
		O		[14] E	F	F	A	C	E	M	E	N	T			O		
		Z											I			S		
[15] I	S	O	I	M	M	U	N	I	Z	A	T	I	O	N				
		A											N					

فصل ۱۳ دستگاه اندوکراین (درون‌ریز)

Unit 13 Endocrine System

تو این درس راجع به غدد یاد میگیریم. خیلی از لغت‌ها رو دیگه بلدی برای همین میبینی سمت راست صفحه لغتاش کم شده.

◈ بررسی دستگاه اندوکراین از نظر ساختاری و عملکردی:

■ INTRODUCTION

The body's main controlling systems are the endocrine system and the nervous system. The endocrine system consists of a widely distributed group of glands that secrete regulatory substances called **hormones**. Because hormones are released into the blood, the **endocrine** glands are known as the *ductless glands*, as compared to exocrine[1] glands, such as sweat glands and digestive glands, that secrete through ducts to the outside. Despite the fact that hormones circulating in the blood reach all parts of the body, only certain tissues respond to a specific hormone. The tissue that is influenced by a specific hormone is called the **target tissue**. The cells in a target tissue have specific **receptors** on their membranes or within the cell to which the hormone attaches, enabling[2] it to act.

۱- برون ریز

۲- امکان دادن

■ HORMONES

Hormones are produced in extremely[1] small amounts and are highly potent[2]. By means of their actions on various target tissues, they affect growth, metabolism, reproductive activity, and behavior.

Chemically, hormones fall into two categories:

- **Steroid hormones**, which are made from lipids. Steroids are produced by the sex glands (gonads) and the outer region (cortex) of the **adrenal glands**.
- Hormones are made of amino acids, which include proteins and protein-like compounds. All of the endocrine glands aside from the gonads and adrenal cortex produce amino acid hormones.

The production of hormones is controlled mainly by negative feedback—that is, the hormone itself, or some product of hormone activity, acts as a control over further manufacture of the hormone—a self-regulating[3] system. Hormone production may also be controlled by the nervous system or by other hormones.

۱- بسیار

۲- قوی

۳- خودتنظیمی

■ THE ENDOCRINE GLANDS

• Pituitary

The **pituitary gland**, or **hypophysis**, is a small gland beneath[1] the brain. It is divided into an anterior lobe (adenohypophysis) and a posterior lobe (neurohypophysis). The **hypothalamus**, a part of the brain that regulates homeostasis, is connected to and controls both lobes. Because the hypothalamus secretes hormones and is active in controlling the pituitary gland, it is considered to be part of the endocrine system as well as the nervous system.

The anterior pituitary produces six hormones. One of these is growth hormone (somatotropin), which stimulates bone growth and acts on other tissues as well. The remainder of the pituitary hormones regulate other glands, including the thyroid, adrenals, gonads, and mammary glands.

The posterior pituitary releases two hormones that are actually produced in the hypothalamus. These hormones are stored in the posterior pituitary until they are needed:

۱- زیر

Antidiuretic hormone (ADH) acts on the kidneys to conserve water and also promotes constriction of blood vessels. Both of these actions increase blood pressure. Oxytocin stimulates uterine contractions and promotes milk "letdown" in the breasts during lactation.

• Thyroid And Parathyroid

The **thyroid gland** consists of two lobes on either side of the larynx and upper trachea. The lobes are connected by a narrow band (isthmus). The thyroid secretes a mixture of hormones, mainly thyroxine (T4) and triiodothyronine (T3). Because thyroid hormones contain iodine, laboratories can measure these hormones and study thyroid gland activity by following iodine levels. Most thyroid hormone in the blood is bound to protein, primarily thyroxine-binding globulin (TBG).

On the posterior surface of the thyroid are four to six tiny **parathyroid glands** that affect calcium metabolism. Parathyroid hormone (PTH) regulates calcium exchange between the blood and bones. It increases the blood level of calcium when needed.

• Adrenals

The adrenal glands, located atop the kidneys, are divided into two distinct regions: an outer cortex and an inner medulla. The hormones produced by this gland are involved in the body's response to stress. The cortex produces steroid hormones:

- Cortisol (hydrocortisone) mobilizes[1] fat and carbohydrate reserves to increase these nutrients in the blood. It also reduces inflammation and is used clinically for this purpose.
- Aldosterone causes the kidneys to conserve[2] sodium and water while eliminating potassium.
- Sex hormones, mainly testosterone, are also produced in small amounts, but their importance is not well understood. Some athletes, illegally and dangerously, take testosterone-like steroids to increase muscle size, strength, and endurance[3].

The medulla of the adrenal gland produces the hormone epinephrine (adrenaline) in response to stress. Epinephrine works with the nervous system to help the body meet physical and emotional challenges.

۱- به حرکت در آوردن
۲- نگهداری کردن
۳- استقامت

• Pancreas

The endocrine portions of the pancreas are the **pancreatic islets[1]**, small cell clusters within the pancreatic tissue. The term *islet*, meaning "small island," is used because these cells look like little islands in the midst[2] of the many pancreatic cells that secrete digestive juices. The islet cells produce two hormones, insulin and glucagon, that regulate glucose metabolism. Insulin increases cellular use of glucose, thus decreasing blood glucose levels. Glucagon has the opposite effect, increasing blood glucose levels.

۱- جزایر کوچک
۲- میان

■ OTHER ENDOCRINE TISSUEs

There are three additional types of glands that secrete hormones:

- The **pineal gland** is a small gland in the brain. It regulates mood, daily rhythms, and sexual development in response to environmental[1] light. Its hormone is melatonin, which some people take to help regulate sleep–wake cycles when they travel between time zones.
- The thymus, secretes the hormone thymosin that aids in the development of the immune system's T cells. The thymus lies in the upper chest above the heart. It is important in early years but shrinks[2] and becomes less important in adults.

۱- محیطی
۲- کوچک شدن

- The gonads, testes, and ovaries are also included because they secrete hormones in addition to producing the sex cells.

Other organs, including the stomach, kidney, heart, and small intestine, also produce hormones.

Finally, **prostaglandins** are a group of hormones produced by many cells. They have a variety of effects, including stimulation of uterine contractions, promotion of inflammation, and vasomotor activities. They are called prostaglandins because they were first discovered in the prostate gland.

اینا یه سری ریشه مربوط دستگاه اندوکراین؛

Root	Meaning	Example	Definition of Example
endocrin/o	غدد یا سستم درون ریز	Endocrinopathy (اندوکرینوپاتی)	هر بیماری مربوط به غدد درون ریز
pituitar/i	هیپوفیز	Pituitarism (پیتویتاریسم)	وضعیت ایجاد شده به علت هر اختلالی در عملکرد هیپوفیز
hypophysi/o	هیپوفیز	Hypophysial (هایپوفیزیال)	مربوط به غده هیپوفیز
thyr/o, thyroid/o	غده تیروئید	Thyrolytic (تایرولیتیک)	تخریب غده تیروئید
parathyr/o, parathyroid/o	غده پاراتیروئید	Hyperparathyroidism (هایپرپاراتایروئیدیسم)	فعالیت بیش از حد غده پاراتیروئید
adren/o adrenal/o	غده ادرنال، اپی نفرین	Adrenergic (ادرنرژیک)	فعال شده توسط یا مربوط به اپی نفرین (ادرنالین)
adrenocortic/o	کورتکس ادرنال	Adrenocorticotropic (ادرنوکورتیکوتروپیک)	فعال در کورتکس ادرنال
insul/o	جزایر پانکراتیک	Insular (اینسولار)	مربوط به جزایر پانکراس

یه تمرین کوچیک مثل همیشه:

1. excision of hypophysis
2. tumor (-oma) of pancreatic islets
3. any disease of the adrenal gland
4. inflammation of the pancreatic islets
5. enlargement of the adrenal gland

Answer: 1. Hypophysectomy / 2. Insulinoma / 3. Adrenopathy / 4. Insulitis / 5. Adrenomegaly

این تستا ببین چی میگن

1. Once taken up by the thyroid gland, iodide .... a series of enzymatic reactions that convert it into active thyroid hormone.

قطب تبریز - اسفند ۹۳

A) Undergoes
B) underscores
C) underlies
D) underlines

2. The normal functioning of the thyroid gland is essential to .... The process of growth.

قطب آزاد - شهریور ۹۶

A) circulate
B) require
C) inhibit
D) regulate

3. Pheochromocytoma, a tumor of the chromaffin cells of adrenal gland medulla that generates a variety of nonspecific symptoms, is one of the most difficult to diagnose of all ....

کلاسیک قطب اصفهان - شهریور ۹۸

A) malignancies
B) constrictions
C) characteristics
D) incidents

4. A vascular tumor of chromaffin tissue of the adrenal medulla or sympathetic paraganglia is called ....

ریفرم قطب آزاد - شهریور ۹۸

A) pheochromocytoma
B) hepatosplenomegaly
C) artrioventricular node
D) phlebotomy

5. Diabetes mellitus is a condition that .... a tremendous health and societal burden worldwide.

قطب آزاد - شهریور ۹۳

A) imposes
B) provides
C) destructs
D) appears

6. Diabetes is a .... of metabolism, the way the body uses digested food for energy.

(پزشکی اسفند ۹۶- قطب اهواز)

قطب اهواز - اسفند ۹۶

A) failure
B) disorder
C) syndrome
D) distortion

Answers: 1. A / 2. D / 3. A / 4. A / 5. A / 6. B

◈ بررسی دستگاه اندوکراین از نظر بالینی:

INTRODUCTION

Endocrine diseases usually result from the overproduction (hypersecretion[1]) or underproduction (hyposecretion) of hormones. They may also result from secretion at the wrong time or from an inadequate target tissue response. The causes of abnormal secretion may originate in the gland itself or may result from failure of the hypothalamus or the pituitary to release the proper[2] amount of stimulating hormones. Some of the common endocrine disorders are described below.

۱- ترشح بیش از حد

۲- مناسب

PITUITARY

A pituitary **adenoma** (glandular[1] tumor) usually increases secretion of growth hormone or adrenocorticotropic hormone (ACTH). Less commonly, a tumor affects the secretion of prolactin. An excess of growth hormone in children causes **gigantism**. In adults it causes **acromegaly**, characterized by enlargement of the hands, feet, jaw, and facial features. Excess ACTH overstimulates the adrenal cortex, resulting in Cushing disease. Increased prolactin causes milk secretion (galactorrhea[2]) in both males and females.

۱- غددی

۲- ترشح شیر

Pituitary hypofunction, as caused by tumor or interruption[3] of blood supply to the gland, may involve a single hormone but usually affects all functions and is referred to as **panhypopituitarism**. This condition's widespread[4] effects include dwarfism (from lack of growth hormone), lack of sexual development and sexual function, fatigue, and weakness. A specific lack of ADH from the posterior pituitary results in **diabetes insipidus**[5] in which the kidneys have a decreased ability to conserve water. Symptoms are polyuria (excessive urination[6]) and polydipsia (excessive thirst[7]). Diabetes insipidus should not be confused with **diabetes mellitus**[8] **(DM),** a disorder of glucose metabolism described later. The two diseases share the symptoms of polyuria and polydipsia but have entirely different causes. DM is the more common disorder, and when the term *diabetes* is used alone, it generally refers to DM. The word *diabetes* is from the Greek meaning "siphon[9]," referring to the large urinary output in both forms of diabetes.

۳- اختلال
۴- منتشر
۵- دیابت بی‌مزه
۶- ادرار بیش از حد
۷- تشنگی بیش از حد
۸- دیابت شیرین
۹- سیفون

THYROID

Because thyroid hormone affects the growth and function of many tissues, a deficiency of this hormone in infancy[1] causes physical and mental retardation[2] as well as other symptoms that together constitute **congenital hypothyroidism**, also called *infantile*[3] *hypothyroidism*. If not diagnosed at birth and treated, hypothyroidism will lead to mental retardation within six months.

In adults, thyroid deficiency causes weight gain; lethargy[4]; rough[5], dry skin; hair loss; and facial swelling. There may be reproductive problems and muscular weakness, pain, and stiffness[6]. A common cause of **adult hypothyroidism** is autoimmune destruction of the thyroid. Hypothyroidism in both children and adults is easily treated with thyroid hormone.

The most common form of hyperthyroidism is **Graves disease**, also called *diffuse toxic goiter*. This is an autoimmune disorder in which antibodies stimulate an increased production of thyroid hormone. There is weight loss, irritability[7], hand tremor, and rapid heart rate (tachycardia). A most distinctive[8] sign is bulging[9] eyeballs, termed **exophthalmos**, caused by swelling of the tissues behind the eyes.

A common sign in thyroid disease is an enlarged thyroid, or **goiter**. However, a goiter is not necessarily accompanied by thyroid malfunction. A simple or nontoxic goiter is caused by a dietary iodine deficiency.

۱- نوزادی
۲- عقب ماندگی ذهنی
۳- مربوط به نوزاد
۴- بی‌حالی
۵- زمختی
۶- خشکی حرکات
۷- بی‌قراری
۸- مشخص، متمایز کننده
۹- بیرون زدگی

PARATHYROIDS

Overactivity of the parathyroid glands, usually from a tumor, causes a high level of calcium in the blood. Because this calcium is obtained from the bones, there is also skeletal degeneration and bone pain. A common side effect is the development of kidney stones from the high levels of circulating calcium.

Damage to the parathyroids or their surgical removal, as during thyroid surgery, results in a decrease in blood calcium levels. This causes numbness[1] and tingling[2] in the arms and legs and around the mouth (perioral), as well as **tetany** (muscle spasms). Treatment consists of supplying calcium.

۱- بی‌حسی
۲- گزگز کردن

ADRENALS

Hypofunction of the adrenal cortex, or **Addison disease**, is usually caused by autoimmune destruction of the gland. It may also result from a deficiency of pituitary ACTH. The lack of aldosterone results in water loss, low blood pressure, and electrolyte imbalance. There is also weakness and nausea and an increase in brown pigmentation. This last symptom is caused by release of a pituitary hormone that stimulates the skin's pigment cells (melanocytes).

An excess of adrenal cortical hormones results in **Cushing syndrome**. Patients with this syndrome have moon-shaped[1] faces, obesity localized in the torso[2], weakness, excess hair growth (hirsutism), and fluid retention. The most common cause of Cushing syndrome is the therapeutic administration of steroid hormones. An adrenal tumor is another possible cause. If the disorder is caused by a pituitary tumor that increases ACTH production, it is referred to as **Cushing disease**.

۱- شبیه به ماه
۲- تنه

THE PANCREAS AND DIABETES

The most common endocrine disorder, and a serious public health problem, is diabetes mellitus (DM), a failure of the body cells to use glucose effectively. The excess glucose accumulates in the blood, causing **hyperglycemia**. Increased urination (polyuria) marks the effort to eliminate the excess glucose in the urine, a condition termed **glycosuria**. The result is dehydration and excessive thirst (polydipsia). There is also weakness, weight loss, and extreme hunger[1] (polyphagia). Unable to use carbohydrates, the body burns more fat. This leads to accumulation of ketone bodies in the blood and a shift toward acidosis, a condition termed **ketoacidosis**. If untreated, diabetes will lead to starvation[2] of the central nervous system and coma. Diabetic patients are prone to cardiovascular, neurologic, and visual problems; infections; and renal failure.

۱- گرسنگی بیش از حد
۲- گرسنگی شدید

از این به هم وصل کنیدهای همیشگی هم یادت نره حل کنی!

___ 1. ketoacidosis
___ 2. adenoma
___ 3. Cushing syndrome
___ 4. acromegaly
___ 5. diabetes insipidus

A. disorder that results from excess growth hormone
B. disorder caused by insufficient release of ADH
C. a result of uncontrolled diabetes
D. disorder caused by overactivity of the adrenal cortex
E. neoplasm of a gland

Answer: 1. C / 2. E / 3. D / 4. A / 5. B

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. In adults, thyroid deficiency causes weight gain, lethargy, rough and dry skin, hair loss, and facial swelling. The word lethargy is closest in meaning to ....

(رزیدنت قطب تبریز - شهریور ۹۸)

A) dizziness
B) drowsiness
C) weakness
D) nervousness

2. The patient's diabetes is an indication of .... glucose tolerance.

(پزشکی شهریور ۹۷- قطب مشهد)

A) generated
B) impaired
C) compensated
D) stigmatized

3. .... The condition known as "exophthalmos" refers to the

(میان‌دوره کشوری - خرداد ۹۸)

A) protrusion of eyes
B) surgical removal of eyes
C) protrusion of thalamus
D) surgical removal of thalamus

4. A variety of drugs have been associated with carbohydrate .... and secondary diabetes mellitus.

(رزیدنت قطب زنجان - شهریور ۹۸)

A) tolerate
B) tolerance
C) tolerable
D) tolerates

رفرم قطب کرمان – شهریور ۹۸

5. For the more common noninsulin-dependent diabetes (NIDDM), studies have found evidence of early resistance to insulin in fat and muscle tissue, and compensatory elevations in circulating insulin, providing an environment that is then conductive to heart and vascular disease.
Which of the following is FALSE?

A) Tissues respond to insulin resistance at different paces.
B) The body responds to the resistance of some tissues to increasing insulin in the body as a whole.
C) Indication of this increase in insulin may improve the diagnosis of pre-diabetes and preventing cardiovascular complications.
D) Contrary to expectation, early resistance to insulin in some tissues helps prevent heart disease.

قطب اصفهان – اسفند ۹۳

6. Acromegaly is caused by an excess of growth hormone, which is most commonly caused by a pituitary tumor. It causes an irreversible overgrowth of bones, particularly those of the face, hands and feet. The skin is also affected and becomes thick, coarse and hairy. Other side effects include high blood pressure and heart disease."
According to the above text, The increase secretion of pituitary ....

A) Can cause bones thickness
B) May affect the heart
C) Leads to merely hair skin
D) Causes pituitary tumor

Answers: 1. C / 2. B / 3. A / 4. B / 5. D / 6. A

اینم یه متن زیبا از «**پزشکی اسفند ۹۷- قطب مشهد**» با موضوع دیابت!!

Diabetes mellitus is currently considered as a condition that imposes[1] a tremendous[2] health and societal burden worldwide. In 1929, insulin was discovered and provided optimism for diabetics. The two types of diabetes were also noted. In insulin-dependent diabetes mellitus (IDDM), genetically-based abnormalities in the body's immune system cause self-destruction of insulin-producing beta cells in the pancreas, with subsequent high blood sugar levels. However, in type II diabetes (NIDDM or non-insulin-dependent diabetes mellitus) , early resistance to insulin in fat and muscle tissues, and compensatory elevations in circulatory insulin, provide an environment that then leads to cardiovascular diseases. In this case, the elevations in blood sugar, blood pressure and blood fats should be controlled during the secondary prevention. Decreasing the likelihood of complications is, therefore, a priority in controlling diabetes.

۱- تحمیل کردن
۲- عظیم

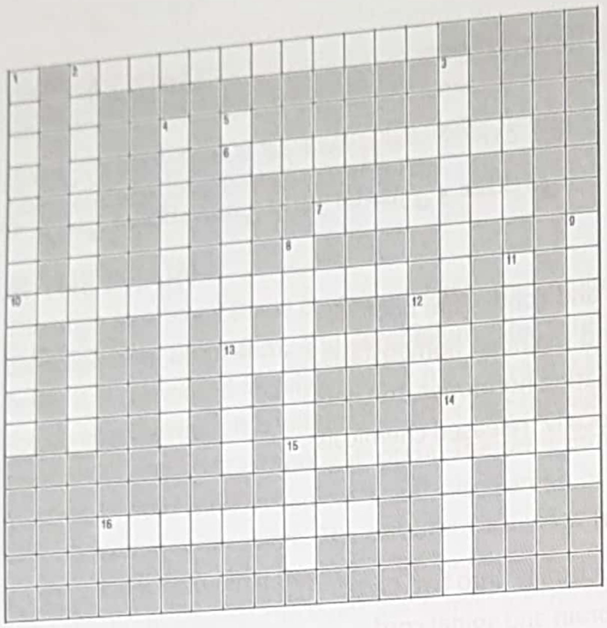
1. The present reality is that ....
A) diabetes is a fatal disease
B) there is no cure for disease
C) diabetes can be easily cured
D) diabetes is likely to be treated

2. In insulin-dependent diabetes mellitus, ...
A) immune system is not involved in the pathogenesis of IDDM
B) abnormalities are created in the genes
C) the beta cells in the pancreas may have been destroyed
D) sugar consumption should be the main cause in the disease

3. In controlling type II diabetes, all of the following may be considered in secondary prevention EXCEPT ....
A) hyperlipidemia
B) hypertension
C) hyperkalemia
D) hyperglycemia

Answers: 1. D / 2. C / 3. C

اینم یه جدول باحال از این فصل:



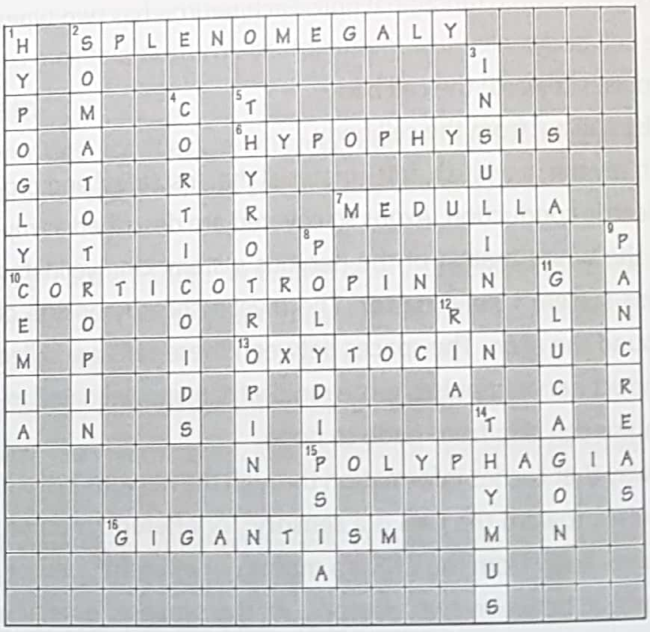
Across

2. Enlarged spleen
6. Also known as the pituitary gland
7. Inner portion of the adrenal gland
10. Stimulates the adrenal cortex
13. Stimulates the ejection of breast milk into the mammary ducts
15. Excessive hunger
16. Proportional overgrowth of body tissues

Down

1. Condition characterized by abnormally low blood glucose level
2. Promotes the growth of bony and soft tissues
3. Hormone that decreases blood glucose levels
4. Hormones produced by the adrenal cortex
5. Influences secretion of thyroid hormone
8. Excessive thirst (a sign of diabetes mellitus)
9. Organ that lies along the posterior surface of the abdominal wall behind the stomach
11. Hormone that increases blood glucose levels
12. Abbreviation for radioimmunoassay
14. Gland located below the sternum

این جواب زیباش:



فصل ۱۴ دستگاه عصبی و اختلالات رفتاری
Unit 14 Nervous System And Behavioral Disorders

این درس راه طولانی‌ای داره. کمر همت رو ببند که شروع کنیم.

◈ بررسی دستگاه عصبی از نظر ساختاری و عملکردی:

■ INTRODUCTION

The nervous system and the endocrine system coordinate[1] and control the body. Together they regulate our responses to the environment and maintain homeostasis. Whereas the endocrine system functions by means of circulating hormones, the nervous system functions by means of electric impulses[2] and locally[3] released chemicals called neurotransmitters.

۱- هماهنگ کردن
۲- تکانه
۳- موضعی

■ ORGANIZATION OF THE NERVOUS SYSTEM

For study purposes, the nervous system may be divided structurally[1] into two parts:

- The **central nervous system (CNS)**, consisting of the **brain** and **spinal cord.**
- The **peripheral nervous system (PNS)**, consisting of all nervous tissue outside the brain and spinal cord

Functionally[2], the nervous system can be divided into the:

- **Somatic nervous system**, which controls skeletal muscles
- **Autonomic nervous system (ANS)**, or **visceral nervous system**, which controls smooth muscle, cardiac muscle, and glands; regulates responses to stress; and helps to maintain homeostasis

Two types of cells are found in the nervous system. **Neurons**, or nerve cells, make up the conducting[3] tissue of the nervous system. **Neuroglia** are the cells that support[4] and protect[5] nervous tissue.

۱- ساختاری
۲- عملکردی
۳- هدایت کننده
۴- پشتیبانی
۵- محافظت کردن

■ THE NEURON

The neuron is the nervous system's basic functional unit. Each neuron has two types of fibers extending from the cell body:

- A **dendrite** carries impulses toward[1] the cell body.
- An **axon** carries impulses away[2] from the cell body.

Some axons are covered with **myelin**, a whitish, fatty material that insulates[3] and protects the axon and speeds electric conduction. Axons so covered are described as *myelinated*, and they make up the **white matter** of the nervous system. Unmyelinated tissue[4] makes up the nervous system's **gray matter**. The myelin sheath consists of individual cells that wrap around the axon. The spaces between these cells are called *nodes*. Myelinated axons conduct nerve impulses more rapidly than unmyelinated axons because the electric impulse can skip from node to node.

Each neuron is part of a pathway that carries information through the nervous system. A neuron that transmits impulses toward the CNS is a **sensory**[5], or **afferent**[6], neuron; a neuron that transmits impulses away from the CNS is a **motor**[7], or **efferent**[8], neuron. A **synapse** is the point of contact between two neurons. At the synapse, energy is passed from one cell to another, usually by means of a **neurotransmitter** and sometimes by direct transfer of electric current[9].

۱- به سمت
۲- دور از
۳- عایق کردن
۴- بافت بدون میلین
۵- حسی
۶- آوران
۷- حرکتی
۸- وابران
۹- جریان الکتریکی

• Nerves

Individual neuron fibers are held[1] together in bundles like wires[2] in a cable. If this bundle[3] is part of the PNS, it is called a **nerve**. A collection of cell bodies along the pathway of a nerve is a **ganglion**. A few nerves (sensory nerves) contain only sensory neurons, and a few (motor nerves) contain only motor neurons, but most contain both types of fibers and are described as *mixed nerves*.

۱- نگه داشته شدن
۲- سیم
۳- دسته

■ THE BRAIN

The brain is nervous tissue contained within the cranium. It consists of the **cerebrum**, **diencephalon**, **brainstem**, and **cerebellum**. The cerebrum is the largest part of the brain; it is composed largely of white matter with a thin[1] outer layer[2] of gray matter, the **cerebral cortex**[3]. It is within the cortex that the higher brain functions of memory[4], reasoning[5], and abstract thought[6] occur. The cerebrum's distinct surface is formed by grooves, or **sulci** (singular: sulcus[7]), and raised areas, or **gyri** (singular: gyrus[8]), that provide additional surface area. The cerebrum is divided into two hemispheres by a deep groove, the longitudinal fissure[9]. Each hemisphere is further divided into lobes with specialized[10] functions. The lobes are named for the skull bones under which they lie.

۱- نازک / ۲- لایه خارجی
۳- قشر / ۴- حافظه
۵- استدلال / ۶- تفکر انتزاعی
۷- شیار
۸- شکنج
۹- شکاف
۱۰- تخصصی

The remaining parts of the brain are as follows:

- The diencephalon contains the **thalamus**, the **hypothalamus**, and the pituitary gland. The thalamus receives sensory information and directs it to the proper portion of the cortex. The hypothalamus controls the pituitary and forms a link between the endocrine and nervous systems.
- The brainstem consists of the:
- **Midbrain**[1], which contains reflex centers for improved vision[2] and hearing.
- **Pons**[3], which forms a bulge[4] on the anterior surface of the brainstem. It contains fibers that connect the brain's different regions.
- **Medulla oblongata**[5], which connects the brain with the spinal cord. All impulses passing to and from the brain travel through this region. The medulla also has vital centers for control of heart rate, respiration, and blood pressure.

The cerebellum[6] is under the cerebrum and dorsal to the pons and medulla. Like the cerebrum, it is divided into two hemispheres. The cerebellum helps to control voluntary muscle movements and to maintain posture[7], coordination, and balance.

۱- مغز میانی
۲- بینایی
۳- پل مغزی
۴- برآمدگی
۵- بصل النخاع
۶- مخچه
۷- موقعیت بدنی

• Protecting The Brain

Within the brain are four **ventricles**[1] (cavities) in which **cerebrospinal fluid (CSF)** is formed. This fluid circulates around the brain and spinal cord, acting as a protective cushion[2] for these tissues.

Covering the brain and the spinal cord are three protective layers, together called the **meninges**. All are named with the Latin word *mater*, meaning "mother," to indicate[3] their protective function. They are the:

Dura mater[4], the outermost and toughest[5] of the three. *Dura* means "hard."

Arachnoid mater[6], the thin, web-like middle layer. It is named for the Latin word for spider, because it resembles a spider web.

Pia mater[7], the thin, vascular inner layer, attached directly to the tissue of the brain and spinal cord. *Pia* means "tender."

Twelve pairs of **cranial nerves** connect with the brain. These nerves are identified by Roman numerals and also by name.

۱- بطن
۲- بالش
۳- نشان دادن
۴- سخت شامه
۵- سخت ترین
۶- عنکبوتیه
۷- نرم شامه

THE SPINAL CORD

The spinal cord begins at the medulla oblongata and tapers[1] to an end between the first and second lumbar vertebrae. It has enlargements in the cervical and lumbar regions, where nerves for the arms and legs join the cord. The spinal cord has a central area of gray matter surrounded by white matter. The gray matter projects toward the posterior and the anterior as the dorsal and ventral horns. The white matter contains the ascending and descending **tracts**[2] (fiber bundles) that carry impulses to and from the brain. A central canal contains CSF.

۱- باریک شدن

۲- راه‌ها

• The Spinal Nerves

Thirty-one pairs of **spinal nerves** connect with the spinal cord. These nerves are grouped in the segments of the cord as follows: Cervical (8), Thoracic (12), Lumbar (5), Sacral (5), Coccygeal (1)

Each nerve joins the cord by two **roots** . The dorsal, or posterior, root carries sensory impulses into the cord; the ventral, or anterior, root carries motor impulses away from the cord and out toward a muscle or gland. An enlargement on the dorsal root, the dorsal root ganglion, has the cell bodies of sensory neurons carrying impulses toward the CNS.

• Reflexes

A simple response that requires few neurons is a **reflex**. In a spinal reflex, impulses travel through the spinal cord only and do not reach the brain. An example of this type of response is the knee-jerk reflex used in physical examinations. However, most neurologic responses involve complex interactions among multiple neurons in the CNS.

THE AUTONOMIC NERVOUS SYSTEM

The ANS is the division of the nervous system that controls the involuntary actions of muscles and glands. The ANS itself has two divisions:

- The **sympathetic nervous system** motivates[1] our response to stress, the so-called fight- or-flight response. It increases heart rate and respiration rate, stimulates the adrenal gland, and delivers more blood to skeletal muscles.
- The **parasympathetic nervous system** returns the body to a steady state and stimulates maintenance activities, such as digestion of food. Most organs are controlled by both systems, and in general, the two systems have opposite effects on a given organ.

۱- تحریک کردن

الف) ریشه‌های مربوط به دستگاه عصبی و نخاع

Root	Meaning	Example	Definition of Example
neur/o, neur/i	سیستم عصبی، بافت عصبی، عصب	neurotrophin (نوروتروفین)	فاکتوری که باعث رشد اعصب می شود (troph/o به معنی تغذیه است)
gli/o	نوروگلیا	glial (گلیال)	مربوط به نوروگلیا

Root	Meaning	Example	Definition of Example
gangli/o, ganglion/o	گانگلیون	ganglioma (گانگلیوما)	تومور گانگلیون
mening/o, meninge/o	مننژ	meningocele (منینگوسل)	بیرون زدگی مننژ
myel/o	نخاع (همچنین مغز استخوان)	hematomyelia (هماتومایلیا)	خون ریزی درون نخاع
radicul/o	ریشه عصب نخاعی	radiculopathy (رادیکولوپاتی)	هر بیماری مربوط به ریشه های اعصاب نخاعی

ب) ریشه‌های مربوط به مغز:

Root	Meaning	Example	Definition of Example
encephal/o	مغز	anencephaly (آننسفالی)	نبود مغز
cerebr/o	مغز	infracerebral (اینفرا سربرال)	زیر مغز
cortic/o	کورتکس مغز، بخش بیرونی	corticospinal (کورتیکواسپاینال)	مربوط به کورتکس مغز و نخاع
cerebell/o	مخچه	supracerebellar (سوپراسربلار)	بالای مخچه
thalam/o	تالاموس	thalamotomy (تالاموتومی)	برداشتن تالاموس
ventricul/o	حفره، بطن	intraventricular (اینتراونتریکولار)	درون بطن
medull/o	نخاع	medullary (مدولاری)	مربوط به نخاع
psych/o	ذهن، روان	psychogenic (سایکوژنیک)	منشا گرفته از روان
narc/o	عدم هوشیاری	narcosis (نارکوسیس)	عدم هوشیاری ناشی از دارو
somn/o, somn/i	خواب	Somnolence (سامنولنس)	خواب الودگی

ج) پسوندهای مربوط به دستگاه عصبی:

Root	Meaning	Example	Definition of Example
-phasia	سخن	heterophasia (هتروفازیا)	گفتن کلمات متفاوت از انچه که مورد نظر است
-lalia	سخن	coprolalia (کوپرولالیا)	استفاده از کلمات به طور مبهم (copro- = مدفوع)
-lexia	خواندن	bradylexia (بردی لکسیا)	کند خواندن
-plegia	فلج	tetraplegia (تتراپلژیا)	فلج چهار اندام
-paresis	فلج موضعی، ضعف	hemiparesis (همی پرسیس)	فلج موضعی یک سمت بدن
-lepsy	صرع	narcolepsy (نارکولپسی)	وضعیتی که در ان فرد اپیزود های ناگهانی خواب را تجربه میکند
-phobia	ترس مداوم و غیرمنطقی	agoraphobia (آگورافوبیا)	ترس از بودن در مکان عمومی
-mania	وضعیت هیجانی، وسواس (obsession)	megalomania (مگالومانیا)	اهمیت دادن به خود به طور اغراق امیز، توهم خودبزرگ بینی

یه تمرین هم حل کن بریم سراغ تست:

1. inflammation of spinal cord
2. pain in a nerve
3. Somnambulism means walking during ____
4. fear of light
5. slowness in speech (-lalia)
6. without the ability to speak

Answer: 1. Myelitis / 2. Neuralgia / 3. Sleep / 4. Photophobia / 5. Bradylalia / 6. Aphasia

ببینم این تستا رو چه میکنی:

1. The patient with intractable pain was referred to the hospital where the surgeon decided that he undergo .... to destroy and breakdown the nerve. (ریفرم میان دوره کشوری – آذر ۹۸)

A) neuralgia
B) neurolysis
C) neurogenesis
D) neurotropic

2. A condition in which the patient is characterized by a defect or loss of power of expression by speech is termed .... (قطب کرمان همسان – شهریور ۹۳)

A) aphagia
B) dyspepsia
C) aphasia
D) ataxia

3. If a patient speaks of "tingling" or "pins and needles", s/he is probably complaining of................ (قطب اهواز – شهریور ۹۴)

A) Tinnitus
B) Ataxia
C) Anorexia
D) Paraesthesia

4. Hemorrhage into the spinal cord is termed .... (قطب همسان – شهریور ۹۵)

A) hematoma
B) meningioma
C) Myelolyspiasia
D) Hematomyelia

5. Meningitis refers to any infectious disease .... the meninges which are the membranes covering the brain and spinal cord.

A) Delaying
B) Predicting
C) Attacking
D) Protecting

قطب شمال - شهریور ۹۵

6. Any disease of a spinal nerve root is termed ....

A) meningocele
B) hematomyelia
C) anencephaly
D) Radiculopathy

قطب همدان - اسفند ۹۴

Answers: 1. B / 2. C / 3. D / 4. D / 5. C / 6. D

◈ بررسی دستگاه عصبی و اختلالات رفتار از نظر بالینی:

■ VASCULAR DISORDERS

The term **cerebrovascular accident (CVA),** or **stroke**, applies to any occurrence[1] that deprives[2] brain tissue of oxygen. These events include blockage in a vessel that supplies the brain, a ruptured blood vessel, or some other damage that leads to hemorrhage within the brain. Stroke is the fourth leading cause of death in developed countries and is a leading cause of **paralysis**[3] and other neurologic disabilities[4].

۱- وقوع
۲- محروم کردن
۳- فلجی
۴- از کار افتادگی

- **Thrombosis**

Thrombosis is the formation of a blood clot in a vessel. Often, in cases of CVA, thrombosis occurs in the carotid artery, the large vessel in the neck that supplies the brain. Sudden blockage by an obstruction traveling from another part of the body is described as an **embolism**. In cases of stroke, the embolus usually originates in the heart. Thrombolytic drugs for dissolving[1] ("busting[2]") such clots are available.

۱- حل کردن
۲- خرد کردن

- **Aneurysm**

An **aneurysm** is a localized dilation of a vessel that may rupture and cause hemorrhage. An aneurysm may be congenital or may arise from other causes, especially atherosclerosis, which weakens the vessel wall. Hypertension then contributes to its rupture.

The effects of cerebral hemorrhage vary from massive functional loss to mild sensory or motor impairment depending on the degree of damage. **Aphasia**, loss or impairment of speech communication[1], is a common aftereffect. **Hemiplegia** (paralysis of one side of the body) on the side opposite the damage is also seen. It has been found in cases of hemorrhage, as in other forms of brain injury, that immediate retraining[2] therapy may help to restore lost function.

۱- ارتباط کلامی
۲- بازآموزی

■ TRAUMA

A **cerebral contusion**[1] is a bruise[2] to the brain's surface, usually caused by a blow to the head. Blood escapes[3] from local vessels, but the injury is not deep.

A more serious injury may cause bleeding into or around the meninges, resulting in a hematoma, a localized collection of clotted blood. Damage to an artery from a skull fracture, usually on the side of the head, may be the cause of an **epidural hematoma,** which appears between the dura mater and the skull bone. The rapidly accumulating blood puts pressure on local vessels and interrupts blood flow to the brain. There may be headache, loss of consciousness, or **hemiparesis** (partial paralysis) on the side opposite the blow. Diagnosis is made by CT scan or magnetic resonance imaging (MRI). If pressure is not relieved[4] within one or two days, death results.

۱- کوفتگی
۲- کبودی
۳- خروج
۴- رفع شدن

A **subdural hematoma** often results from a blow[1] to the front or back of the head, as when the moving head hits a stationary[2] object. The force of the blow separates the dura from the underlying arachnoid. Blood from a damaged vessel, usually a vein, slowly enters this space. The gradual blood accumulation puts pressure on the brain, causing headache, weakness, and **dementia**[3], loss of intellectual function[4]. If there is continued bleeding, death results.

A cerebral **concussion**[5] results from a blow to the head or from a fall and is usually followed by temporary loss of consciousness and a short period of amnesia[6]. After-effects of a concussion may include headache, dizziness, vomiting, fatigue, and even paralysis, among other symptoms. Damage that occurs on the side of the brain opposite a blow as the brain is thrown against the skull is described as a **contrecoup** (کونترکو) **injury**[7] (from French, meaning "counterblow"). Other injuries may damage the brain directly. Injury to the base of the brain may involve vital centers in the medulla and interfere with respiration and cardiac functions.

۱- ضربه
۲- ثابت
۳- زوال عقل
۴- عملکرد ذهنی
۵- ضربدیدگی
۶- فراموشی
۷- آسیب متقابل

■ NEOPLASMS

Almost all tumors that originate[1] in the nervous system are tumors of nonconducting support cells, the neuroglia. These growths are termed **gliomas** and may be named for the specific cell type involved, such as **astrocytoma**, a tumor of astrocytes, or **neurilemmoma** (schwannoma), a tumor of the cells that make the myelin sheath[2]. Because they tend[3] not to metastasize, these tumors may be described as benign. However, they do harm by compressing brain tissue. The symptoms they cause depend on their size and location. There may be **seizures**[4], headache, vomiting, muscle weakness, or interference with a special sense, such as vision or hearing. If present, edema and **hydrocephalus**, accumulation of excess CSF in the ventricles, add to the tumor's effects.

۱- ناشی از
۲- غلاف
۳- تمایل داشتن
۴- تشنج

■ DEGENERATIVE DISEASES

Multiple sclerosis (MS) commonly attacks people in their 20s or 30s and progresses at intervals and at varying rates. It involves patchy[1] loss of myelin with hardening (sclerosis) of tissue in the CNS. The symptoms include vision problems, tingling or numbness in the arms and legs, urinary incontinence, **tremor** (shaking[2]), and stiff gait[3]. MS is thought to be an autoimmune disorder, but the exact cause is not known.

Parkinsonism occurs when, for unknown reasons, certain neurons in the midbrain fail to secrete the neurotransmitter dopamine. This leads to tremors, muscle rigidity[4], flexion at the joints, akinesia (loss of movement), and emotional problems.

Alzheimer disease (AD) results from unexplained degeneration of neurons and atrophy of the cerebral cortex. These changes cause progressive[5] loss of recent memory, confusion, and mood changes. Dangers associated with AD are injury, infection, malnutrition, and aspiration of food or fluids into the lungs. Originally called *presenile dementia* and used only to describe cases in patients about 50 years of age, the term is now applied to these same changes when they occur in elderly patients.

۱- تکه تکه
۲- لرزیدن
۳- راه رفتن خشک
۴- سفتی
۵- پیشرونده

■ EPILEPSY

A prime characteristic of epilepsy is recurrent seizures brought on by abnormal electric activity of the brain. These attacks may vary from brief[1] and mild episodes known as absence (petit mal) seizures to major tonic–clonic (grand mal) seizures with loss of consciousness, **convulsion**[2] (intervals of violent involuntary muscle contractions), and sensory disturbances. In other cases (psychomotor seizures), there is a one- to two-minute period of disorientation[3]. Epilepsy may be the result of a tumor, injury, or neurologic disease, but in most cases, the cause is unknown.

۱- خفیف
۲- تشنج علامت دار
۳- عدم آگاهی به موقعیت

EEG reveals abnormalities in brain activity and can be used in the diagnosis and treatment of epilepsy. The disorder is treated with antiepileptic and anticonvulsive drugs to control seizures, and sometimes surgery is of help. If seizures cannot be controlled, the individual with epilepsy may have to avoid certain activities that can lead to harm.

■ SLEEP DISTURBANCES

The general term *dyssomnia* includes a variety of possible disorders that result in excessive sleepiness or difficulty in beginning or maintaining sleep. Simple causes for such disorders include schedule changes or travel to different time zones (jet lag). **Insomnia** refers to insufficient or nonrestorative[1] sleep despite ample[2] opportunity[3] to sleep. There may be physical causes for insomnia, but often it is related to emotional upset caused by stressful events. **Narcolepsy** is characterized by brief, uncontrollable attacks of sleep during the day. The disorder is treated with stimulants, regulation of sleep habits, and short daytime naps.

Sleep apnea refers to failure to breathe for brief periods during sleep. It usually results from upper airway obstruction, often associated with obesity, alcohol consumption, or weakened throat muscles, and is usually accompanied by loud snoring[4] with brief periods of silence. Dental appliances[5] that move the tongue and jaw forward may help to prevent sleep apnea. Other options are surgery to correct an obstruction or positive air pressure delivered through a mask.

Sleep studies identify two components of normal sleep, each showing a specific EEG pattern. Non-rapid eye movement (NREM) sleep has four stages, which take a person progressively into the deepest level of sleep. If sleepwalking (somnambulism) occurs, it occurs during this stage. NREM sleep is interrupted about every 1.5 hours by episodes of rapid eye movement (REM) sleep, during which the eyes move rapidly, although they are closed. Dreaming occurs during REM sleep and muscles lose tone, while heart rate, blood pressure, and brain activity increase.

۱- غیراحیاکننده، غیرقابل ترمیم
۲- کافی
۳- فرصت
۴- خر و پف
۵- لوازم

■ BEHAVIORAL DISORDERS

• Anxiety Disorder

Anxiety[1] is a feeling of fear, worry, uneasiness, or dread[2]. It may be associated with physical problems or drugs and is often prompted[3] by feelings of helplessness[4] or loss of self-esteem[5]. Generalized anxiety disorder (GAD) is characterized by chronic excessive and uncontrollable worry about various life circumstances, often with no basis. It may be accompanied by muscle tensing, restlessness, dyspnea, palpitations, insomnia, irritability, or fatigue.

Panic disorder is a form of anxiety disorder marked by episodes of intense[6] fear. A person with panic disorder may isolate[7] himself or herself or avoid social situations[8] for fear of having a panic attack or in response to attacks.

A **phobia** is an extreme, persistent[9] fear of a specific object or situation. It may center on social situations, particular objects, such as animals or blood, or activities, such as flying or driving through tunnels.

۱- اضطراب
۲- وحشت
۳- برانگیختن
۴- درماندگی
۵- از دست دادن اعتماد به نفس
۶- شدید
۷- منزوی کردن
۸- موقعیت‌های اجتماعی
۹- مداوم

• Mood Disorder

Depression is a mental state characterized by profound[1] feelings of sadness, emptiness[2], hopelessness[3], inability to concentrate[4], and lack of interest or pleasure[5] in activities. Depression is often accompanied by insomnia, loss of appetite, and suicidal tendencies, and it frequently coexists[6] with other physical or emotional conditions. In **bipolar disorder** (formerly called manic–depressive illness), normal moods alternate[7] with episodes of depression and **mania**[8], a state of elation[9] that may include agitation[10], hyperexcitability, or hyperactivity.

۱- عمیق / ۲- پوچی
۳- ناامیدی / ۴- تمرکز
۵- لذت / ۶- همراهی
۷- تغییر خلق / ۸- شیدایی
۹- سرخوشی / ۱۰- بی‌قرار

• Psychosis

Psychosis is a mental state in which there is gross misperception[1] of reality. This loss of touch with reality[2] may be evidenced by **delusions**[3] (false beliefs), including **paranoia**[4], delusions of persecution[5] or threat, or **hallucinations**[6], imagined sensory experiences. Although the patient's condition makes it impossible for him or her to cope[7] with the ordinary demands[8] of life, there is lack of awareness that this behavior is inappropriate. **Schizophrenia** is a form of chronic psychosis that may include bizarre[9] behavior, paranoia, anxiety, delusions, withdrawal, and suicidal tendencies. The diagnosis of schizophrenia encompasses[10] a broad[11] category of disorders with many subtypes. The causes of schizophrenia are unknown, but there is evidence of hereditary factors and imbalance in brain chemistry.

۱- درک اشتباه / ۲- واقعیت
۳- هذیان / ۴- بدگمانی
۵- آزار و اذیت / ۶- توهم
۷- کنار آمدن با / ۸- نیازها
۹- عجیب
۱۰- دربرگرفتن
۱۱- گسترده

• Attention Deficit Hyperactivity DISORDER

Attention deficit[1] hyperactivity disorder (ADHD) is difficult to diagnose because many of its symptoms overlap[2] or coexist with other behavioral disorders. Although inattention and hyperactivity usually appear together in these cases, one component may predominate[3]. ADHD commonly begins in childhood and is characterized by attention problems, easy boredom[4], impatience[5], and impulsive[6] behavior. Associated hyperactivity may be manifested by fidgeting[7], squirming[8], rapid motion, or excessive talking. In adults, the signs of ADHD may be confused with other disorders, such as mood disturbances, substance abuse, and endocrine problems.

۱- کمبود
۲- همپوشانی
۳- برجسته شدن
۴- بی‌حوصلگی
۵- بی‌صبری
۶- پیش رانشی (بدون فکر)
۷- بی‌قراری
۸- به خود پیچیدن، دستپاچگی

از این به هم وصل کنیدهای همیشگی هم یادت نره حل کنی!

__ 1. contrecoup injury
__ 2. aphasia
__ 3. hydrocephalus
__ 4. paranoia
__ 5. odynophobia

A. mental disorder associated with delusions of persecution
B. excessive fear of pain
C. loss of speech communication
D. accumulation of CSF in the brain
E. damage to the brain on the side opposite the point of a blow

Answer: 1. E / 2. C / 3. D / 4. A / 5. B

اینم باز یه سری تست از همین مبحث! میخوام بهت ارزش این متن‌ها رو نشون بدم!

1. "Accumulation of excess CSF in the ventricles of the brain" is termed......

ریفرم همدان - شهریور ۹۸

A) Hydrocephalus
B) Neurilemmoma
C) Glioma
D) Hemiparesis

2. Inspection of a patient's .... is an integral part of the neurological examination and should never be omitted if the patient is fit to walk.

قطب تبریز - شهریور ۹۵

A) trait
B) gate
C) strait
D) gait

3. A medical device that relives pressure on the brain caused by fluid accumulation is .... shunt.

A) Hydrocephalus
B) Intracranial
C) Somatic
D) Ventriculperitoneal

قطب اهواز- شهریور ۹۷

4. A mental state characterized by jealousy, delusions of persecution or perception of threat or harm is referred to as ....

A) psychosis
B) mania
C) paranoia
D) delirium

ریفرم تبریز – شهریور ۹۸

5. Which term means "clinical specialist in mental disorders":

A) Psychiatry
B) Pasychiatrist
C) Psychology
D) Psychologist

قطب شیراز – اسفند ۹۷

6. A condition originating from the mind is termed as ....

A) psychological
B) psychosomatic
C) psychogenic
D) Psychosis

قطب همدان – اسفند ۹۶

7. Brief, uncontrollable attacks of sleep during the day id termed ......

A) Narcolepsy
B) Insomnia
C) Sleep apnea
D) somnambulence

قطب همدان – شهریور ۹۷

8. Insomnia is a situation in which the person can getenough..............

A) Food
B) Sleep
C) Exercise
D) Vitamins

قطب کرمان – شهریور ۹۳

9. The root "somn/o" as in "somnolence" refers to a medical condition for ....

A) dizziness
B) walking
C) sleepiness
D) Unconsciousness

قطب همدان – اسفند ۹۴

10. A patient with. ....suffers from loss of speech communication

A) alexia
B) ataxia
C) aphasia
D) amnesia

میان دوره کشوری – خرداد ۹۸

11. The patient complains of weakness of her lower extremities. She has ....

A) Tetraplegia
B) Hemiparesis
C) Paraparesis
D) Hemiplegia

قطب زنجان – شهریور ۹۵

12. Sudden violent involuntary series of contractions of a group of muscles that may be paroxysmal is called ....

A) Shivering
B) convulsion
C) epilepsy
D) seizure

ریفرم قطب همدان – شهریور ۹۸

Answers: 1. A / 2. D / 3. D / 4. C / 5. B / 6. C / 7. A / 8. B / 9. C/ 10. C/ 11. C / 12. B

اینم یه متن از «پزشکی ریفرم و کلاسیک شهریور ۹۸- قطب شمال» با موضوع نارکولپسی!!

Narcolepsy is a disease characterized by malfunctioning sleep mechanics. It can consist of a sudden and uncontrollable bout[1] of sleep during daylight hours and disturbed sleep during nighttime hours. It commonly makes its appearance during adolescence or young adulthood.
Narcolepsy can take a number of forms during daylight hours. One more common symptom of the disease during daytime hours is a sudden attack of REM (rapid-eye-movement) sleep during normal waking hours. During a sleep attack, narcoleptics may continue automatically performing the activity they were involved in prior to falling sleep. Others may experience cataplexy i.e. a sudden loss of muscle tone that may cause the head to droop[2] or the knees to wobble[3] in minor attacks or a total collapse in more serious attacks.
During sleep hours, narcolepsy can also manifest itself in a variety of ways. During the transitional phase that precedes the onset of sleep, it is common for hallucinations to occur. These hallucinations, known as hypnologic phenomena, consist of realistic perceptions of sights[4] and sounds during the semi-conscious[5] state between wakefulness and sleep. Narcoleptics may also suffer from night wakening during sleep, resulting in extremely fragmented[6] and restless sleep. Then upon waking, a narcoleptic may experience sleep paralysis perhaps for several minutes immediately.

۱- دوره
۲- افتادن
۳- تکان خوردن، تلو خوردن
۴- بینش
۵- نیمه آگاه
۶- قطعه قطعه، یکپارچه نبودن

1. An appropriate title for this passage could be ....
A) a good night's sleep
B) a cure for narcolepsy
C) an unusual sleep disturbance
D) hallucinations during sleep

2. Narcolepsy is least likely to be seen in a person at the age of ....
A) 11-15
B) 16-20
C) 21-25
D) 26-32

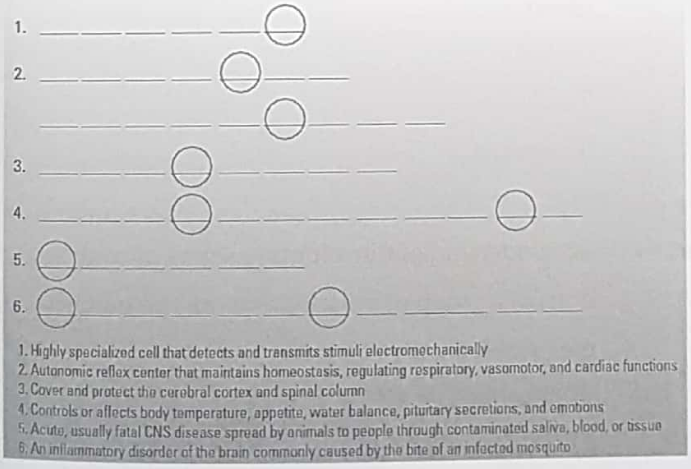
3. Narcoleptics are more likely to experience .... during daily activities.
A) cataplexy
B) sleep attacks
C) sleep paralysis
D) automatic behavior

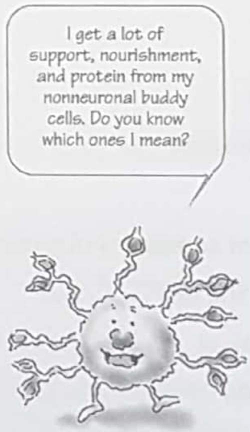
4. As stated in the passage, ... may involve a complete collapse.
A) hallucinations
B) cataplexy
C) automatic behavior
D) REM sleep

5. Hypnologic phenomena most likely occur ....
A) after going to bed
B) in the middle of the night
C) soon after waking
D) a few hours after

Answers: 1. C / 2. D / 3. B / 4. B / 5. A

این آخرین بازی رو هم برو. باید کلمات رو بنویسی بعد حروف داخل دایره‌ها رو کنار هم بذاری تا به جواب سوال برسی!!



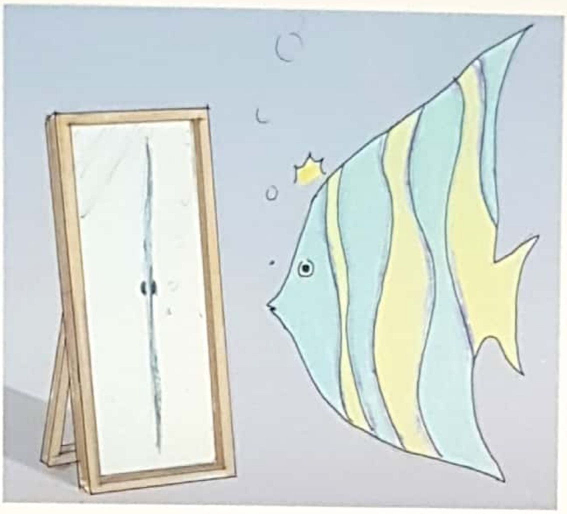


«من خیلی پشتیبانی و تغذیه و پروتئین از رفیق غیرنورونیم میگیرم. میدونی اسم رفیقم چیه؟» پاسخ:

1. Neuron; 2. Medulla oblongata; 3. Meninges; 4. Hypothalamus; 5. Rabies; 6. Encephalitis
Answer to puzzle: Neuroglia

Good Luck!

۶



به آدم‌ها یادآوری کنید چقدر زیبان، بعضی وقت‌ها خودشون رو از زاویه درست تماشا نمی‌کنند.

#ناشناس

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نشر طبیبانه

موسسه آموزشی دانش‌آموختگان تهران